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Chemical Trade Journal
Supplement, April 15, 1899.

THE

CHEMICAL TRADE JOURNAL:

A WEEKLY NEWSPAPER DEVOTED TO

The Commercial Aspect of the Chemical and Allied Industries.

EDITED BY

GEORGE E. DAVIS,

FORMERLY ONE OF HER MAJESTY'S INSPECTORS OF ALKALI WORKS,
CHEMICAL ENGINEER AND CONSULTING CHEMIST.

VOLUME XXIII.

[JULY TO DECEMBER, 1898.]

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Communications for the Editor, if intended for insertion in the current week's issue, should reach the office not later than **Tuesday morning.**

Readers are invited to forward items of intelligence, or cuttings from local newspapers, of interest to the trades concerned.

Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

SULPHATE OF AMMONIA—A HINT.

A GOOD deal has been said of late in regard to the popularisation of Sulphate of Ammonia among farmers, and according to the Sulphate of Ammonia Committee the demand is growing as the product wins favour. It undoubtedly is becoming very popular in Germany, for even the doubling of the local production has not checked the exports of sulphate from Great Britain.

This is very satisfactory, but our own home consumption is hardly growing at the same rate as in Germany, so that there is ample room for the exercise of popularising methods.

Under these circumstances it was a surprise to us to find that the Committee who have this matter in hand were not represented at the recent Royal Show.

For years the Permanent Nitrate Committee have turned an attractive and instructive exhibit to very good use, having done more to induce farmers to use nitrate by the few minutes occular demonstration thus afforded than could be achieved by reams of circulars and pamphlets. They only use the latter as reminders of the striking results shown to visitors at the Show, without which they would never pay the slightest heed to, or have the slightest credence in arguments on paper. With the majority of farmers you can only convince with objects.

Now the "Royal" is the fair of fairs to farmers, and among the visitors you catch practically all those who are desirous of trying all that is worth trying, and are able to do so. At many of the local shows you can only appeal to a few such as these, for a large number are either unwilling or unable to try anything their grandfathers did not employ.

Under these circumstances the absence of sulphate of ammonia from among the fertilizer exhibits at the Royal Show is much to be regretted. We know it was not absolutely an unknown quantity, for it was mentioned among the list of articles exhibited by one well-known guano firm, but this was the only mention out of nine separate exhibits devoted to fertilizers. The same fact is strikingly noticeable in the official catalogue, where sulphate, with a single entry (and that only an indirect reference) had to give place to nitrate of sod a with four separate entries, as well as special mention under the general heading of manures. We emphasise the point now so as to give plenty of time for a change next year.

CLIENTS AND THEIR COUNSEL.

We are pleased to see that the long-suffered practice of counsel acting by proxy is beginning to be adversely criticised by judges as well as the victimised clients.

Absence, it is said, makes the heart grow fonder, but there is no doubt that the all too frequent absence of eminent counsel from the minor cases for which they have been retained is rapidly engendering the sickness of hope deferred in the hearts of latter-day litigants.

The instance to which Mr. Justice Grantham recently took exception is, after all, only a trifle more flagrant than many which pass unnoticed day by day. Not only was counsel himself absent, but his junior and also his junior's substitute were *non est*. Later in the day the senior counsel came into Court, and, after explaining that he had been engaged elsewhere—probably for a fatter fee—he graciously condescended to admit that "had he been told that his junior was not only absent, but had not provided a substitute, he would have done something in the matter." Would he, really? In any walk of life save that of a Q.C. he would have "done" for himself. It sounds positively ridiculous to assert as a fact that a client after retaining counsel cannot command even the few moments' consideration necessary to ensure the presence of a substitute's substitute. You pay fees to learn that if the gentleman to whose care you have entrusted your business, and possibly your reputation, had only known you were not even receiving third hand attention, he would have tried to accommodate you with the office boy.

If a reporter explained the absence of his "account by an eye witness" to an editor by saying that had he known his substitute's substitute was not there he would have done something, by the end of the week he would be like his report—absent, and lucky to have escaped alive. If a doctor engaged to attend three patients, and left them to weather the crisis of their illness without even a substitute's substitute, there would be a nine days' scandal, entailing his ruin professionally as well as the loss of his fees. Not so a Q.C. He simply sails into Court, admits that he had never taken the trouble to make sure whether his client was represented even by a junior's junior, and then blandly desires "to apologise for his apparent lack of courtesy." There is no doubt about its being "apparent," and we should think that lack of honesty would be nearer the truth; nevertheless, there is no discount off the fees. The law is the embodiment of probity and equity, and so we suppose this fact suffices to exonerate all influenced by such an environment from the usual claims entailed by the commercial code of ethics.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for April, 1898, as compared with April, 1897 :—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	9,079	9,805	2,713	3,059
Sweden and Norway	7,274	13,543	1,356	2,751
Germany	15,344	12,940	4,326	3,275
Holland	9,027	7,024	1,535	1,616
France	5,561	4,686	1,953	1,553
Spain and Canaries	22,250	13,999	7,223	4,608
Italy	18,173	21,379	5,283	6,774
United States	258,963	93,851	65,081	16,133
Australasia	20,684	9,206	6,042	2,927
British North America	11,765	21,564	3,667	6,042
Other countries	99,446	89,961	26,670	26,279
Total	477,566	297,958	125,849	75,017

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	57,397	62,298	18,335	18,299
Other countries	30,787	31,511	9,741	9,651
Total	88,184	97,809	28,076	27,950

NOTES ON FOREIGN TRADE.

GHENT.

The importation of *pyrites* for Ghent chemical works during 1897 exceeded that for 1896 by 4,832 tons. Besides the usual supply from the Bay of Biscay ports, two cargoes arrived here from Norway.

The *chemicals* mentioned in the table of imports include carbonate of soda, caustic soda, chloride of lime, sulphate of ammonia, sulphate of soda, &c., all from the British Isles; and phosphate rock, and nitrate, from Florida and Peru respectively. The decline of 6,603 tons during 1897, compared with 1896, turns upon nitrate imports; for, while in fact chemicals from British ports increased, as also phosphate rock from Florida, there was a falling-off in nitrate imports to the extent of 9,938 tons.

Rock-salt again declined in 1897. The imports thereof were less in 1896 than in 1895, and 1897 shows a further decrease of 1,730 tons. Although French and German salt compete in the market with that from Liverpool, the decline of the latter at Ghent may perhaps be explained in part by the importation of the same British article at Bruges.

URUGUAY.

Belgium leads in stearine *candles* with £4,000., Germany sends £2,000., and Great Britain £100. Here again the latter ought to better her position.

Great Britain takes the larger share of *blood-guano*, £24,000. out of a total of £42,000. ; the United States £12,000.

DUNKIRK.

The exportation of natural *phosphates* increased 8,992 tons. With the exception of 4,100 tons to Spain, all this export went to the United Kingdom.

A new import from India (Vezagapatam) is to be noted, viz., *manganese ore*, some 8,000 tons of which entered in 1897. It is stated that this ore is much richer in manganese than the Spanish ore, and that much larger imports from India may be expec ed in 1898.

JAVA.

Imports of *sulphate of ammonia* have been effected in considerable quantities from Europe and Australia, chiefly for use in the sugar fields. Some planters, however, prefer to use the native, or imported beancake, the chemical properties of which become assimilated more slowly but more thoroughly with the soil. Dried blood as a fertiliser has been imported on a large scale from Australia, its use having been found advantageous on many coffee estates.

The trial of nitrate from the west coast of South America has not been repeated.

The *soap* industry is in a flourishing condition, and the production as well as the consumption of native-made soap is yearly increasing, to the detriment of the cheaper qualities of soap of British manufacture, of which only small imports have taken place during the year under review.

MARSEILLES.

The figures of exports of *soap* do not vary much, and have been about the same as the previous year, viz , 15,262 tons, against 14,715 tons in the previous year. The total output of soap in Marseilles for the year is estimated at 130,000 tons, against 125,000 tons in 189 .

As a substitute for groundnut oil the Marseilles soap-makers have used cotton oils, and this change has led to a very extensive trade with the United States, whence in the last year as much as 53,000 tons of refined cotton oils were imported. These oils are subject to a duty in France of 6 fr. per 100 kilos. gross, say 7 fr. 25 c per 100 kilos. net, and there is now a proposal made to increase this duty to 25 fr. per 100 kilos. with a view to protect the local oil mills, which are not in a position to compete against the enormous influx from America.

Imports of raw *sulphur* show a large increase, 39,940 tons against 25,175 tons in 1896.

Exports of *candles* have been 5,610 tons, against 5,371 tons in 1896.

BILBAO.

Paints.—Red lead and white lead are made in the country and are not imported. Oxide of iron is imported from England, but endeavours are being made to start a factory in Spain, with the object of securing this branch of the trade. Colours in powders are at present entirely supplied by Germany, with which England cannot compete. Zinc white and preparations are mostly procured from Belgium, but the national production is being developed. Earths used in painting used to be chiefly supplied from France, but for some years Spain has been preparing them, and has defeated not only France, but Germany, which also used to send small quantities. Prepared colours come but little from England, indeed only special qualities. They are admittedly good, but are unable to compete in price.

Chemical products used in industries are mostly supplied from the United Kingdom. Belgium appears to compete in caustic soda and carbonate of soda. France, Germany, and recently Belgium have been competing with Great Britain in the supply of chloride of lime. France seems to send the most.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Producing Coke Gas and Bye-products. P. Naef and R. S. Garton. 13,164. June 13.
Producing Coke Gas and Bye-products. P. Naef and R. S. Garton. 13,165. June 13.
Vaporising and Storing Inflammable Oils. W. Donaldson. 13,185. June 13.
Apparatus for Reducing Litharge, etc., to Suboxide. G. Bischof. 13,202 June 13.
Bromo-Electric Extraction of Gold. W. H. Hyatt. 13,209. June 13.
Treatment of Peat. E. Rischgitz 13,263. June 14.
Organic Products from Seaweed. A. Krefting 13,289. June 14.
Electrolysis of Alkaline Chloride Solutions. J. R. Wylde, J. W. Kynaston, and The United Alkali Co., Limited. 13,393. June 15.
Manufacture and Storage of Carbonate of Iron. C. Hog. 13,406. June 16.
Treatment of Sewage. A. J. Wanklyn and W. J. Cooper. 13,438. June 16.
Apparatus for Converting Solid Carbon Dioxide into the Liquid Form. A. F. Watson. 13,496. June 17.
Dyeing Soap or Paste. J. B. Koenig. 13,503. June 17.
Manufacture of Ferrous and Ferric Compounds. C. F. Wülffing. 13,521. June 17.
Production of Colouring Matters. A. G. Green, A. Megenberg, and the Clayton Aniline Co., Limited. 13,561. June 17.
Producing Calcium Carbide. W. R. Smith. 13,645. June 18.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in or Relating to the Purification of Sewage and Apparatus therefor. W. D. Scott-Moncrieff, 14, Victoria-street, Westminster, London. Eng. Pat., 13,400. May 31, 1897.

The main feature is the construction of suitable apparatus, in which the bacteriological process identified with the patentee may be conducted in *alternate* stages, so as to further the action of aerobic and anaerobic bacilli. There are six figures illustrating the plant, by means of which the sewage is passed up a tank favourable to aerobic organisations, whence it overflows into a covered anaerobic chamber. The partially treated sewage is then spread automatically over a series of coke filters, the liquid collecting at the bottom being passed to another series by gravity or pumping until the aerobic conditions have purified it.

Improvements in Sewage Tanks. J. Howard, Stone Ridge Farm, Disley, Cheshire. Eng. Pat., 16,691. July 14, 1897.

The sewage is passed into a closed tank or cesspool through a pipe sealed by a U bend. Near the top is a syphon overflow pipe, and an extra overflow pipe by which the liquid portions are removed periodically into the drain. A ventilating pipe is provided which also ventilates the drain. The more or less solid matters which settle to the bottom are removed by a sludge pump or run off by gravity. There is one figure showing the tank in sectional elevation.

Process for the Production of Calcium Carbide in Blast Furnaces. F. J. Bergmann, 5, Mohnestrasse, Neheim a/Ruhr, Germany. Eng. Pat., 29,384. Dec. 11, 1897.

Coke, or a liquid hydrocarbon, is fused with lime in a water jacketted blast furnace, such as is used in lead and copper works, by means of a blast of oxygen. The latter is obtained by heating manganese dioxide in a suitable furnace, and then regenerating the peroxide from the brown oxide by a current of air at a temperature below red heat. The blast furnace is rectangular, and divided into three compartments for coke. With liquid fuel it is cylindrical. The hearth is graphite in either case. Less oxygen is required with the liquid fuel. There are nine figures.

Improvements in or Relating to the Extraction of Wool Grease. A. J. Boult, 111, Hatton Garden, London (communicated by L. E. Vial, Rue des Palais, Brussels, Belgium). Eng. Pat., 19,014. August 17, 1897.

The water in the magma of fat, obtained by decomposing wool washers' waste with acid in the usual way, prevents direct extraction with volatile solvents. The complete removal of the water also is difficult towards the end of the process, owing to the thickening of the magma. The latter is therefore partially dehydrated by the heat of waste gases, and then mixed with a quantity of wool grease, oleic acid, or other fatty matter, contained in a round bottomed vessel fitted with an agitator. The mixture is kept at a temperature slightly above 100°C, so that the water is driven off. The seething subsides when the dehydration is complete. Extraction with benzine, etc, can then be easily accomplished, yielding raw wool grease, of which 68 to 70 % is saponifiable, and a fine dry powder, containing about 4 % of nitrogen, which can be used as a manure.

Improvements in the Manufacture of Soap Powders. W. P. Thompson, 322, High Holborn, London (communicated by E. Sieglin, Dusseldorf, Germany). Eng. Pat., 7,932. April 9, 1898.

The materials, after disintegration and mixing, are subjected to a current of air and dusted with dry soap powder, the current of air passing through a box in which is the dry soap powder on its way to meet the freshly mixed materials. There are two figures.

Parliamentary Jottings.

DANGERS OF ITALIAN ICE CREAM.

In the House of Commons, last week, Sir Herbert Maxwell asked the President of the Local Government Board whether his attention has been drawn to recent deaths of children owing, as is alleged, to their having eaten so-called "ice-creams," sold by Italians in the streets; whether he is aware that several samples of these creams have been reported on by Dr. Klein, to the effect that all of them were swarming with colonies of the bacilli characteristic either of sewage matter or putrescence, or both; whether, in addition, attention has been drawn to the danger of mouth to mouth infection to children sucking ices successively out of the same glass; and whether the provisions of the Public Health Acts and the Food and Drugs Acts are inefficient to control or prohibit the sale of poisonous compounds such as these ices.

Mr. Chaplin: My attention has been drawn to this subject, and I am aware of the fact that children have recently suffered from vomiting and diarrhœa after eating ice-cream. One of them died, and the coroner's jury attributed the death to the consumption of these ice-creams. I understand that in 1894 Dr. Klein made some investigations for one of the London vestries of specimens of water and ice-creams submitted to him, and that he discovered numerous organisms. As to the third question, the practice referred to is obviously objectionable, but I have no evidence of actual mischief having resulted.

Sir H. Maxwell asked if the right hon. gentleman had considered the question whether these so-called ice-creams might be considered as dairy products, and if, therefore, the premises in which they were prepared could not be subjected to the same regulations that all dairymen had to submit to.

Mr. Chaplin said he would be sorry if such premises as those ice-creams were prepared in should be considered as in the same position as dairies. But there was no doubt, from what he knew at present, that the conditions under which these ices were produced were discreditable in the extreme.

Mr. James Lowther asked whether it was not the fact that this article was made by persons who were alien immigrants.

No reply was given to this question, but Mr. Chaplin by raising his hat seemed to indicate his assent.

ALLEGED CASE OF PHOSPHORUS POISONING.

On Monday, Sir C. Dilke (Gloucester, Forest of Dean), asked the Secretary of State for the Home Department whether his attention had been called to a serious case of phosphorus poisoning at Messrs. Moreland & Sons, at Gloucester, which, instead of being reported in accordance with the special rules, had been concealed by the foreman; was he aware that, in spite of the seriousness of the case, a fine of only 10s. was inflicted; and if there were any steps which he could take in the matter.

Sir M W. Ridley (Lancashire, Blackpool).—Yes, certainly my attention has been called to this case; as the right hon. baronet must be aware, the offence was discovered and the prosecution instituted by the factory inspector. The amount of the fine was 10s., or, with costs, £2 6s. 6d. There are no further steps which can usefully be taken in the case; but I have reason to believe that the conviction will have the desired effect of securing in future a better compliance on the part of this firm with the requirements of the Act.

Next Friday, 8th inst., has been set apart for the discussion of the question of lead poisoning in the Potteries.

ESTIMATING POTASH IN THE PRESENCE OF IRON.

IN a paper on this subject read by C. C. Moore before the American Chemical Society, the author says :—I have found it practicable to wash out ferric, aluminic and other chlorides, and the excess of platinic chloride which is present by means of an acidulated alcoholic wash. Thus it is possible to avoid the precipitation and filtering of ferric hydroxide, calcium oxalate, etc., and the subsequent evaporation and ignition for the removal of ammoniacal salts.

The substance under examination is brought into solution by the usual acid digestion, and the excess of acid removed by evaporation, the residue and insoluble matters separated by filtration. The filtrate is now ready for the potash estimation. To it is added the usual platinic chloride solution, only enough to combine with the potash being necessary. The mixture is evaporated, on the steam-bath, nearly to dryness, so that it solidifies on cooling, just as in the ordinary determination. From 15 to 25 cc. of the acidulated alcohol are added, and allowed to stand two or three minutes with an occasional stirring. The ferric, aluminic, etc., and excess of platinic chlorides readily go into solution, leaving the crystallised potassium chlorplatinic salt and part of the neutral sulphates, sodium chloride, etc. These residues are brought on to a filter, either paper or Gooch, and after one or two washings by decantation, the potassium chlorplantinate and the other residue are washed on to the filter, and washing continued with the same acidulated alcohol until all excess of platinic chloride is washed out. Now wash with the Lindo ammonium chloride solution (200 grams ammonium chloride to one litre of water) until sulphates, sodium chloride, etc., are washed out. Then wash out the ammonium chloride with eighty-five per cent. alcohol, after which a pure potassium chlorplatinate salt is left, which is dried and weighed as usual.

The acidulated alcohol is prepared by passing dry hydrocholoric acid gas into cool ninety per cent. alcohol. This is easily done by gently heating strong aqueous hydrochloric acid in a flask. The liberated gas is passed through sulphuric acid, and into the alcohol which is kept in a cooled vessel. Some ethyl chloride will be formed, but most of the gas will be held in solution mechanically by the alcohol. The absorption is continued until one cc. of the alcohol neutralizes about two and one-third cc. of a normal potassium hydroxide solution, using phenolphthalein or any other suitable indicator.

The solvent action of this acidulated alcohol on potassium chlorplatinate is about equal to that of the Lindoammonium chloride solution, and about one-third that of ordinary eighty per cent. alcohol. Or, if expressed in figures, one gram. of pulverised potassium chlorplatinate was digested for two hours in 500 cc. of acidulated alcohol, at a room temperature of 80°, the flask being shaken continuously. The solvent action under these condition was found to be one part in 60,000.

In experimenting, the ash sample used by the "Association of Official Agricultural Chemists'" in 1897 was used. The reporter found this ash to contain about 11·05 per cent. of potash. The sample was digested in hydrochloric acid, evaporated to dryness and taken up with hydrochloric acid and water, so that the portion of the filtrate used corresponded to one-half gram. of ash, and contained less than one-half cc of hydrochloric acid. Four portions were taken from each of two samples, and only sufficient platinic chloride was added to combine with the potassium chloride present. The variation of the maximum and minimum results in each sample was 0·03 per cent., and the average of the eight determinations varied 0 01 per cent. from the result found by the Association.

It was desired to see under what extreme conditions the potash could be determined. An aliquot portion corresponding to one-half gram. was used. To this were added 2·0 grams. ferric chloride, 0·30 gram. aluminic chloride, 0·20 gram. sodium chloride, and 0·03 gram calcium sulphate, and only sufficient platinic chloride to combine with the potassium chloride. The result was less than 0·40 per cent. higher than the known percentage, and it is possible that potash was in the chemicals added.

Again, a solution was made of 0·30 gram. potassium chloride, 0·56 gram. calcium sulphate, 1·00 gram. sodium chloride, and 7 0 grams. ferric chloride. Only 5 cc. of a standard solution of platinic chloride were added, which is but a trifle above the requisite amount for the potassium chloride. Duplicate determinations and a blank were run. The evaporation was continued until a solution of the consistency of molasses was formed amounting to about five cc, To wash each sample in a Gooch, 190 cc. of the acidulated alcohol, and 250 cc. of ammonium chloride solution were used, and thirty-five minutes required for complete washing.

While one sample recovered 110 per cent. of the original potassium chloride, the second result was 100·50 per cent., and the blank was not stained. The potassium chlorplatinate crystals were below medium size, very uniform and of splendid colour.

It was observed that the presence of other salts was beneficial, as it made the crystallisation of the potassium chlorplatinate more perfect, and prevented any subsequent reduction.

Should the original substance contain ammoniacal salts, they must be removed, else ammonium chlorplatinate will be formed.

The decomposition and removal of ammoniacal salts by nitric acid is most applicable here. The process is described in "Crookes' Select Methods," page 32. If hydrochloric acid is present, it is beneficial, as the chlorine which would be liberated also decomposes ammonical salts

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for April. The total shipments were 76,779,229 gallons, compared with 68,434,629 gallons in 1897. The total for the ten months ending April, 1898, was 842,799,303 gallons, against 782,639,427 gallons in the same period of 1897. The details of the shipments are as follows :—

	Gallons.
CRUDE PETROLEUM.	
Total, April, 1898	8,741,647
,, ,, 1897	11,852,472
NAPHTHAS.	
Total, April, 1898	1,091,454
,, ,, 1897	269,066
ILLUMINATING.	
Total, April, 1898	61,284,786
,, ,, 1897	62,094,744
LUBRICATING AND PARAFFIN.	
Total, April, 1898	4,701,852
,, ,, 1897	3,796,625
RESIDUUM.	
Total, April, 1898	959,490
,, ,, 1897	421,722

THE FUTURE OF SODIUM NITRATE.

ANOTHER VIEW.

AT the meeting of the Salar del Carmen Nitrate Syndicate, Limited, on Monday, the Chairman (Mr. W. T. Morrison), in addressing the shareholders, said that in regard to the question of the future of nitrate he was disposed to take rather a hopeful view of it. The consumption of nitrate for the year ending June 30, 1898, was estimated to have been about 1,200,000 tons—that was about 10 per cent. more than in the previous year. The stocks now were 223,000 tons, as against 307,000 tons last year; so that estimating the consumption for the next twelve months upon a similar scale to that of last year the statistical position should be very good next spring. At any rate, he thought that nitrate had now touched bottom, and this was the general impression. There were very few companies that could make a profit at the present prices, and this circumstance had involved the closing of some important oficinas. True, they themselves had come in as a new producer, and another large company had also commenced producing; but the probability was that the production would not be greater than it was for the last year. With regard to the question of

A NEW COMBINATION

certain proposals had been set on foot, and probably some arrangement would in the future be made to form a new combination, for it was suicidal, when they had such a valuable article as nitrate of soda, to give it away without adequate profit. The company was in a favourable position in regard to production, as it produced as cheaply as, if not cheaper than, anyone else; but that was not the case with many oficinas, and a very large amount of capital had been invested in nitrate when it was utterly hopeless for the companies to obtain profit at the present prices. He was sure the Chilian Government would not be adverse to a combination on business lines An important matter in connection with the company was the manufacture of iodine, which was an important by-product arising from the manufacture of nitrate of soda. The company's grounds had turned out extremely rich in iodine, and they expected that this article would form a substantial addition to their revenue. The Chairman then pointed out that there was a likelihood of a great increase in the acreage of wheat, and that as nitrate was a most useful manure there was every prospect that there would be shortly a greater demand for it. He hoped this might be so, although he was afraid that

NITRATE OF SODA WAS NOT APPRECIATED

by farmers in this country as it should be. As the price of wheat has risen enormously in consequence of the American war and speculation, he left it to them to imagine what the effect would be in the event of a European conflict; it would probably then go up to 100s. The cultivation of wheat, therefore, should certainly be encouraged.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

DISTINGUISHING BONE FROM MINERAL SUPER-PHOSPHATES.

(To the Editor of the Chemical Trade Journal.)

Sir,—The method of analysis as proposed by M. F. Poquillon to distinguish bone from mineral phosphates referred to in your last issue would be of no avail where bone char or bone ash has been used as a source of phosphates. It would be therefore manifestly unjust to say that these were not bone phosphates because they did not contain fatty matter.

I should like to see some accurate method adopted. It is an important matter to both manure manufacturers and farmers, and it is a step in the right direction to learn that a distinguished chemist is giving it attention. Any indirect test, however, such as M. F. Poquillon suggests, would be an unsatisfactory one, and I hope he will discover some method that will be more reliable, and that will be more universal in its application to bone materials.—Yours, &c., J. M. D.

ANSWERS TO CORRESPONDENTS.

DROMART (Ardennes).—We cannot trace any reference to the process you mention. Advise us where or when we referred to it and we will do our best for you.

F.P.—The price is always stated when advised. Apply to the publishers.

A.T.F.—It has been returned.

SULPHUR FROM PYRITES.

A FURNACE has been devised and patented by Mr. Charles Wade Stickney, of Antelope, Idaho, for the purpose of separating and recovering sulphur from pyrites. The object is to do this without too great loss of sulphur in the form of sulphurous acid, which has been the difficulty with most of the processes heretofore tried for the same purpose. The experiments which have resulted in the construction of this furnace have extended over several years.

The furnace, says the "Engineering and Mining Journal," is cylindrical in form. A mechanical stirrer in the interior slowly revolves. This is made of a number of removable blades of cast iron fixed on a central shaft, somewhat in the form of propeller paddles. The blades not only stir the ore, but work it gradually to the end opposite to the feed chute, and also assist the disintegration of the ore as fast as the crumbling coat of iron oxide is formed on the surface of the lumps, so that a fresh surface of unroasted ore is constantly exposed to the heat, steam and air. These blades wear several months, and are then replaced at a small cost. A tail feed chute at one end is kept filled with ore, cracked by a crusher to about the size of nut coal. It does no harm if part of it is finer. The top of the chute is covered with a heavy iron plate ground to its seat, so as to exclude any appreciable quantity of air and also prevent the escape of the furnace gases, which are normally under a slight pressure. The ore is fed into the furnace automatically from the chute by the rotary action of the stirrer. Along the bottom of the furnace a number of tuyeres enter into it horizontally, at a tangent to the circumference. These tuyeres are alternately connected in sets of three with the supply reservoir of fuel gas (or petroleum), the steam boiler and the air blower. The larger part of the heat is supplied by bituminous coal mixed with the ore, but the final adjustment of the proper degree of heat is made by admitting fuel gas (or vaporised petroleum), by turning a stop-cock. It has been found nearly impossible for the engineer in charge to keep the heat at the proper degree with solid fuel alone, as it varies from hour to hour, in an unaccountable manner. But the small amount of gas admitted gives an exact and almost instantaneous control of the heat, which is essential to the success of the operation. Where natural gas, water gas, producer gas, or petroleum are cheap, the whole fuel may be gas. In this case the combustion of the gas itself supplies a large amount of the steam, and but little is required from the steam boiler. In all cases the gas and air pass through pipes in the fire-box of the boiler and arrive in the ore furnace very hot. But the cheapest method for the process is to use for the bulk of the fuel culm or refuse siftings from bituminous coal mixed with the ore, and to inject, as needed, a small amount of fuel gas along with the steam. The waste gas from coke ovens would answer the purpose of fuel very well.

MESSRS. A. BOAKE, ROBERTS, & CO., LTD.—This firm ask us to notify that their dividend warrants in respect to the Preference stock are ready, and were posted to the shareholders yesterday, 1st inst.

WEBB'S ACID CONCENTRATING PATENT.

A QUESTION OF VALIDITY.

Judgment was given at Dublin by the Court of Appeal on Thursday in the case of Webb v. Kynoch, which was argued in the early part of the sittings. It was an appeal from a decision of the Master of the Rolls (C.T.J. 571. p. 300), granting an injunction to Mr. George Webb, of Manchester, against Messrs. Kynoch and Co , Limited, the well-known manufactures of explosives, for having, at their works at Arklow, infringed the plaintiff's patent by erecting and putting into operation an arrangement in all respects similar to his for concentrating sulphuric acid. Three defences were raised by the defendants—viz. (1) that they did not infringe the patent ; (2) that the patent was not new, and was consequently invalid ; and (3) that the specification was defective and inadequate, and therefore not maintainable.

The Lord Chancellor said that the Court were unanimously of opinion that the defendants had infringed the plaintiff s patent, and the only question remaining was as to the validity of the patent. The changing of weak dilute sulphuric acid into concentrated acid was a matter of very great importance in many manufactures, and inventors had frequently exercised their ingenuity in the effort to carry out the process in a cheaper and more convenient way. Evidence showed Webb's apparatus was the best of the kind ever invented, and could be worked most cheaply and easily. These improvements were produced not by any new processes, but by a new combination of old processes. He was of opinion that such a combination was properly a subject for a patent, and it certainly would be very hard upon a bona-fide inventor if by the stupid blundering of his specification, and because his draughtsman was not sufficiently precise, he was to lose the benefit of his patent. He (the Lord Chancellor) held that the patent and specification were all that was claimed for them, and that the decision of the Master of the Rolls should be upheld.

Lord Justice Fitzgibbon said that the plaintiff s apparatus for concentrating a sulphuric acid achieved that purpose in distinctly a better manner than any previous invention. Evaporation was facilitated, breakage was reduced by placing the whole apparatus in a chamber which, although divided by an iron flooring, might be made uniformly hot, and great simplification of detail was effected. But in the present state of the law, as expounded by the House of Lords, the patent was rendered invalid if the specification claimed as an essential ingredient something that was old or something covered by a pre-existing patent. Here Mr. Webb claimed in his specification the process of passing sulphuric acid by means of a tube from the top of one to the bottom of the next of his series of vessels. That process had already been patented by Chance, and he (Lord Justice Fitzgibbon) believed that anyone reading Mr. Webb's specification would come to the conclusion that that process was one which he had patented, and in respect of which he was entitled to receive a royalty. In claiming that process as an essential portion of his patent Mr. Webb had claimed too much, and by so doing he failed to satisfy the condition imposed by law. In his judgment, therefore, the patent should, upon that ground alone, be declared to be invalid.

Lord Justice Walker said that with very much regret he had arrived at the same conclusion as Lord Justice Fitzgibbon, that the plaintiff's patent could not be held to be valid. He thought that any intelligent inventor, on reading Webb's specification, would think he was excluded from the process of conveying the acid from the top of one vessel to the bottom of the other, a process which had been already covered in the Chance patent.

Lord Justice Holmes said that he was of opinion that the combination of old details, which was what the plaintiff claimed, might be the subject of a valid patent. He thought it was plain that Webb claimed no other novelty except a novel combination. Whatever his claim was, it was a single claim. Anyone with a little care could see the details of the apparatus and how it differed from Chance's. The process of tubing from one vessel to the other was only one of the many old details which Webb claimed to combine, and was not a separate claim in itself.

The Lord Chancellor said that his Court being equally divided, the decision of the Master of the Rolls would stand. Under the circumstances no order could be made as to the costs of the appeal.

Mr. Ronan, Q.C.: "We will have to go to the House of Lords to get our costs."

Mr. Doyle, for the defendants, asked for a stay to enable the defendants, if they wished, to appeal to the House of Lords.

The Lord Chancellor said that all reasonable facilities would be given for that purpose.

THE SEWAGE COMMISSION.—The Royal Commission on Sewage Disposal, presided over by Lord Iddesleigh, heard evidence on Monday as to the law of the subject in England from Mr. Alfred D. Adrian, assistant secretary of the Local Government Board. Legal witnesses from Scotland and Ireland have been called for the 12th July, and the Commission then propose to call officers of the Mersey and Irwell, the Ribble, and the West Riding Rivers Boards.

THE SCOTTISH OIL INDUSTRY.

TWO years ago it seemed as if the long-suffering and much-enduring mineral oil industry of Scotland were about to enter on a new era of prosperity, for long-absent dividends were then coming within the grasp of the shareholders of the companies. The promise of that time has not been fulfilled, thanks to the remarkable burden of American and Russian competition in oil, and to the constantly-declining price of sulphate of ammonia. It is curious to think how much the fortunes of the Scotch Oil Companies now depend on this bye-product that was formerly allowed to go to waste. It is comforting to know that the improvement in agriculture bids fair to have a happy influence on the Scotch Oil Companies during the financial year on which they have just entered. But for a recovery in the price of sulphate of ammonia their future would have been black indeed. We are not prepared to say that the industry has never been in a more evil case than last year, for its history has been one of successive trials and imminent perils. But it does look as if the limit of economy had been reached at last, and that the resourcefulness which has in the past dragged the industry from the jaws of death could now do little more. There is not in commerce a more striking example of adaptability to circumstance, and of stimulus by misfortune, than is afforded by the Scottish oil industry. Indeed, the story of the ups and downs of the destructive distillation of shale is one of the romances of trade

Of the long list of companies which have, since the days of Mr. Jas Young, of Kellie, entered the shale-field, only five now may be said to be known to fame. And how these five stand in the estimation of investors may be seen by the following comparative table of Stock Exchange prices :—

Company.	Highest and lowest prices in 1897. H.	L.	Make-up prices. 1897. June 8.	1898. June 7.
Broxburn	9⅜	7½	7⅞	8 1/16
Do. 6% Pref.	11¾	11½	—	—
Oakbank	—	—	5¼	5
Do. (£5 paid)	10/-	—	—	—
Pumpherston	6¾	4	4	5⅜
Do. 6% Pref.	9	8¼	—	—
Young's P.L	27/6	19/-	1	1
Do. 6% Mort. Deb.	5	—	—	—
Linlithgow	—	—	7/6	—

Not to show any invidious distinction, we shall take the companies alphabetically. The first, therefore, is Broxburn, which is the only one that has had a continuous career of prosperity, in so far that it has always been able to return something to its shareholders, and which is again in a position to declare a dividend at this time. The position of the Broxburn Company is that the operations of the year have left a balance of £41,952., which with £1,643 brought in from last year makes a surplus of £43,595 to be disposed of. From this is taken the sum of £12,978 for depreciation, at the rate of 5 per cent. on the total capital expenditure, £7000 for the renewal of retorts, and £1,000 for the accident insurance fund. After these provisions the Preference shareholders receive £6,000 and the Ordinary shareholders receive, at the rate of 7½ per cent., £14,981, which payments leave £1,635 of a floating balance to be carried into the accounts of the current year. It must be admitted that this is a very satisfactory state of affairs, considering the depression of the trade and the inability of the other companies to make ends meet. No doubt the Broxburn Company has exceptional advantages over its competitors in having an abundant supply of cheap shale, and in having started with the latest and most perfect machinery of manufacture. It has really never looked behind, and since starting in 1875 has paid away £579,193 in dividends, written off £336,479 for depreciation, and carried £11,892 to reserves. Out of the reserves is now to be created a fund to insure against the risks and liabilities of the New Compensation Act. Starting with £2,000 the Accident Insurance Fund is to be augmented by £1,000 per annum, which is about the amount of the premium the company would have to pay if the risks were insured under a policy. This seems a very proper and business-like arrangement. The Retort Renewal Account, however, does not seem so reasonable. A sum of £49,544 has been expended on the renewal of retorts, but instead of being charged at once either against capital or revenue has been kept in suspense, and written off year by year. After writing off £7,000 for last year a balance remains of £11,000, which is scarcely entitled to be ranked among the assets This company stands in the happy position of having ample funds on hand, and having uncalled capital to the amount of its borrowed money apart from the value of property and plant.

In contrast with the prosperity of Broxburn is the gloom of the Linlithgow Oil Company, which has so long struggled bravely with adversity, and yet lives to tell of renewed efforts to restore vitality. This company has been living on sufferance since last year. The mineral superiors agreed to reduce the royalties, and the debenture-holders agreed to accept three-fifths of the interest due to them. With these concessions, and a reduction of the wages, the directors hoped to make ends meet during the year which has just expired. They hardly did so, for there was a balance of £804 to the bad, due, however, not so much to loss on trading as to necessary alterations in plant. It is in the matter of plant that this company is handicapped, not having the capital to erect the latest retorts. Yet it is wonderful what has been done in obtaining the full profit of what plant there is The working account seems to have left a surplus of £955. after providing for the maintenance and repairs, though not for depreciation, but as the interest on debentures, loans, and overdrafts required £1,759., there is a net deficiency on the year of £804 That is the book entry, but as no depreciation has been written off the mines, works, and plant since 1896, the actual loss is really not shown. As far as working is concerned, this company made £2,248. more out of sulphate of ammonia than in the previous year, but realised less by £6,190. on the output of oils and wax owing to the lower prices current. On balance, therefore, the results were £3,942. worse than in 1896, but this difference was more than covered by the savings again effected in the works. The directors of the Linlithgow Company, however, think that a point has now been reached when costs cannot be further reduced to any material extent, so that relief must be looked for in an improvement in the prices of the products. So far the Hispano-American War has rather helped the Scottish industry, but whether sufficiently to leave a margin on the year's working cannot yet be surmised.

We come now to the Oakbank Company, which has had a prosperous youth and has had a somewhat checkered middle-age. This concern has done neither better than was anticipated by the directors a year ago —which is not saying very much. Higher prices were not expected, and the only improvement anticipated was in further reduction of cost. This reduction has not been as great as was hoped in the year just closed, because of delay in getting the new retorts to work, and the benefit will be more felt in the current year. On the other hand, more was obtained last year for sulphate of ammonia than was expected. The working account shows a surplus of £4,275., which, however, cannot be accounted as profit seeing that nothing is written off for depreciation of works and plant. From it is taken £4,000. for renewal of retorts, and the balance (including £1,363. 14s. 4d. brought in from previous year) remaining at credit of profit and loss account is £1,638. 8s. 4d. The prices realised for products during the year are said to be the lowest on record. Yet there is this surplus by the usual method of rigorous economy and ingenious devices. A very little change in prices has a greater effect on the Oakbank than on the others, because of its large output and relatively small capital. The prices which are now being obtained for sulphate of ammonia are higher than the average of the past year.

The Pumpherston Company shows a balance at the credit of profit and loss (we hesitate to call it profit) on the year's working of £18,195. 3s. 6d. This, with £1,855. 11s. 3d. brought forward, gives a surplus on this account of £20,050. 14s. 9d., off which £4,525. 15s. 1d. is taken to pay the interest on loans and debentures, £8,000. for depreciation, and £6,000. for dividend at the rate of 6 per cent. on the Preference shares. Allowing for interest and depreciation, the profit is thus not £18,195. but £5,670. Still, it is something to have even that margin on working in these bad times, and notable that the margin is better rather than worse than that of the previous year. Again this result is obtained by improved appliances and rigid economy. In six years this company has effected improvements and economies in manufacturing equal to £70,000. per annum, without which, of course, it would have been long since swept out of existence. The drop in prices on the year's make as compared with 1892 is stated to be no less than £78,000 This company's chief product is sulphate of ammonia, which is already realising a good deal more than last year, so the results of the current year ought to provide a better balance-sheet if not some fragment of a dividend for the ordinary shareholders. All the profit last year, it seems, was made by the new retorts, none being yielded by the old plant. That is to say, only one-half of the material put through yielded a margin; therefore, if the whole of the new retorts are at work in the current year and the old plant stopped, the profit ought to be *pro tanto* increased.

Lastly we come to the premier company—the concern which is the lineal descendant of the business founded by the late James Young, the founder of the Scottish oil industry. Young's Paraffin Light and Mineral Oil Company, besides being the oldest of the companies, is also the most heavily burdened with capital. It has not succeeded in making any profit on the operations of last year. After paying all expenses of working and management, and for maintenance of works and mines, there is a balance of £15,227. 17s, but then the interest on Debenture bonds and loans requires £18,627. 14s 9d, so that there is an actual loss of £3,404. 17s. 9d., even without counting anything for depreciation. This result seems due to the unsatisfactory working of some of the plant, as well as to the low prices obtained for the products. The output of sulphate of ammonia was reduced by 800 tons just when the price was advancing. The fall in prices was equal last year to £21,800. on this company's output, and against that fall not very much was effected in the way of economies. In fact, we are led to under-

stand that nothing better can be done with the existing plant, and that a complete installation of new retorts will be necessary. Experiments have been made with some new retorts which promise to materially improve the condition of the company. Meanwhile, the output of minerals is being increased, whereby the overhead cost is reduced. And the directors are making arrangements to cover the risks under the Compensation Act. What this charge will amount to is not stated, but it will form some set-off to the better prices which are being realised for some of the products.

We have now completed our survey of the affairs of such of the Oil Companies as publish their accounts and whose shares are still listed. There are two or three other concerns engaged in the manufacture of crude oil, which do not come before the public, and whose shares are not now quoted. To sum up, then, the results of these five companies during the past year we present the following :—

Company.	Paid-up Capital.	Profit or Loss on Year. P.	L.
Broxburn.....	£199,750	£41,952	—
Linlithgow	127,067	—	£804
Oakbank	67,500	4,275	—
Pumpherston ..	210,500	18,195	—
Young's	752,808	—	10,174
Totals.....	£1,357,625	£64,422	£10,978
Deduct Loss.....		10,978	
Net Profit		£53,444	

From this it will be seen that the net profit of the five companies is only equal to 4 per cent. of their combined capitals, apart from charges on debentures and loans, and without allowance (save by Broxburn and Pumpherston) for depreciation. This, it must be confessed, is a poor result, but it might have been worse, and these companies have come through such tribulation that they are thankful for small mercies. In circumstances well calculated to produce despair they have kept alive an interesting industry in which Scotland has taken a pride for a whole generation, and in which many thousands of wage earners are employed though not much profit is made.—*Glasgow Herald.*

THE CHEMICAL TRADE OF POLAND.

A NEW FIELD FOR ENTERPRISE.

THE chemical industry in and round Warsaw is by no means fully developed. The works already existing cannot meet the demand; many materials, comprising even articles of primary importance such as sulphuric, nitric, and hydrochloric acids have to be imported from Germany.

It must be admitted that the kingdom of Poland is not very advantageously situated for the development of chemical industry in general, there being a complete absence of raw materials which *nolens volens*, must come from abroad, mostly from Hamburg, but, on the other hand, labour is cheap, coal abundant, and the market good and growing continually as new districts of the Empire are being thrown open year after year, so that the dividends paid by the different works are very good.

Within the last few years three new branches of the chemical industry were started in the kingdom of Poland, namely, artificial manures, organic dyes, and electro-chemistry.

In 1893 some Belgians together with some Polish capitalists started works on a large scale at Lowicz for the production of *superphosphates*. Up to that time all artificial manure came from Germany, the slag from the Thomas and Gilchrist steel process, known locally as "Thomas slag," being the most popular. Thanks to cleverly worked advertising and the gratis distribution of superphosphates amongst the peasants this Thomas slag is gradually taking a second place, and finds difficulties in competing with superphosphates. The price of Thomas slag is 7·5 c. per 1 per cent. of soluble phosphoric acid.

Coal-tar Dyes.—The growth of the organic dye industry will, in all probability, be very slow owing to the absence of the raw materials which have to be imported, the coal in this district not being adapted to coking, whilst gas is only known at Warsaw and some four or five provincial towns, so that the sources from which the materials can be obtained are very limited, whilst on account of the comparatively heavy duty which has to be paid on these materials if imported, it is in many cases more advantageous to import the dyes as such. There are here, however, some large works started by a German firm who, being the pioneers in this branch, are doing very well.

Electro-chemistry is quite new in Poland. Water-power is practically unknown, and consequently electrolytic plants have to be worked by steam, and although salt (required for the electrolytic process) has to be brought from the Don, it is still an industry which pays well, chiefly owing to the fact that the duty imposed on articles obtained by electrolysis is very heavy. The first works of this kind which are now in course of construction have been started by a German firm, part of the capital being subscribed by some Polish capitalists.

It thus appears that Germans and Belgians are the pioneers in Poland of these branches of the chemical industry which might have gone into British hands, and in which British knowledge and enterprise would have found a new field, and British capital a safe and profitable investment had they only been forthcoming.

Natural Sulphur is to be found in the Empire of Russia in six places, in the governments of Astrachan, Kazan, and Samara, and in Daghestan, in Transcaspia, and in the government of Kielce in this Consular district.

In the first three places the beds of sulphur have neither been examined geologically nor from a commercial point of view, and remain untouched. In Daghestan there are several rich and large beds of sulphur which are not worked for want of proper appliances, with the exception of that at Khioutska from which last year 450 tons were extracted, 120 men being employed. In Transcaspia there are very rich beds which have been properly surveyed and reported upon scientifically, but not as to their commercial value.

Unique in Russia for their wealth and extent are the sulphur beds at Czarkowsky in the government of Kielce, besides which of all the beds already mentioned they occupy the most favourable position both geologically and from a commercial point of view, on account of which they will doubtless in the near future occupy an important place in this branch of industry than the limited extent to which they are now worked would otherwise require.

They lie not far from the Austrian frontier on the bank of the River Nieder about five versts from its junction with the Vistula, in the district of Pinchoff in the government of Kielce.

These beds were already known in the thirteenth century. Sulphur lies here in beds of a thickness of from 20 to 35 feet, containing 20 to 25 per cent. of pure sulphur, increasing to 50 per cent. as a greater depth is obtained.

These beds were first worked for a short time at the beginning of this century when this territory still belonged to Austria, they were then abandoned till 1871, when Count Puslowski established works here for the extraction of sulphur from the ore by means of overheated steam, but the first year showed that this was a losing undertaking as the heating by imported coal came too expensive, besides the great cost of the necessary materials.

An attempt to dissolve sulphur ore in carbon bisulphide for the extraction of sulphur also proved a failure.

It being evident, however, that the attempts to derive profit from the sulphur beds failed only from the want of proper means, last year some Moscow merchants formed a company for the exploitation of these beds, and have already started works for the extraction of sulphur by a process invented by a Mr. Patcanoff.

This method which is very simple and cheap is roughly as follows :—The ore is placed in a hermetically closed apparatus filled with water which is heated by the aid of steam, the sulphur, when dissolved, falls through a kind of filter or sieve into a receptacle where it solidifies into little balls or prisms; the useless part of the ore remains in the upper part of the apparatus and is considered waste.

There are at the works eight such machines made at Warsaw, and one machine is being put up now for distilling sulphur.

The extraction of sulphur by this means costs less than half as much as by the means formerly employed, the sulphur obtained being almost chemically pure.

Hand labour being cheap sulphur ore costs the factory only 5 c. a poud, the price of pure sulphur being the same as that imported from Sicily, viz., 85 c. per poud. 75 per cent. of the sulphur imported into Russia comes from Sicily, nearly all of it being destined for the sulphuric acid works at Baku.

The amount of sulphur imported into Russia is as follows :—

Year.	Quantity. Tons.	Value. £
In 1891	13,048	64,000
1892	14,813	72,000
1893	21,016	89,900
1894	20,540	92,500
1895	18,000	49,300
1896	18,000	48,500

Now, however, that Mr. Patcanoff's method has proved to be a practical success endeavours are being made to get the duty on imported sulphur raised to 20 c. gold per poud, when, the supply of sulphur ore being practically unlimited, it is hoped that Russian sulphur will be able to compete successfully with the imported article.

FATALITY AT A PAPER MILL.—William Freeman, engine tender at Peebles and Company's paper mill, Rishton, whilst oiling the big engine of the mill on Monday night, slipped and was caught in the wheels. He was whirled round at a terrific speed, his body being cut to pieces.

Trade Notes.

The Flash-point of Lamp Oil to be Raised.—Rockefeller has at last been overthrown. The deadly oil that he has been dumping down upon our shores will (if the House of Commons supports the decision of the Petroleum Committee) no longer be permitted to destroy British lives. Here is the gratifying decision to which the Committee, in spite of its chairman, Mr. Jesse Collings, has arrived :—The House of Commons Petroleum Committee have decided by a majority of two (the Chairman not voting) to raise the flash-point of oil for lamps to 100 degrees Abel. Our contemporary the *Star*, which has striven so strenuously and consistently for the raising of the flash point, is now urging the fact that "Nothing remains now but to translate the decision of the Petroleum Committee into an Act of Parliament. The same forces which induced that decision can pass an Act of Parliament. We confidently appeal to the Press to apply them." In order to show how easy is the effort, and how simple the Act necessary to carry out this life-saving reform, our contemporary appends a draft of a Bill drawn for the purpose. Despite the howlings of the defeated, it should be just as easy and simple a matter as it was to run through the Act of 1879, but no doubt the S.O. *clique* will fight to the last.'

Heavy Fines for River Pollution.—At Haslingden, on Monday, the Haslingden, Rawtenstall, and Bacup Outfall Sewerage Board were fined £20 and costs for permitting, and Haslingden Corporation £20. and costs for causing, solid sewage to fall in the river Irwell. The sanitary inspector and two carters of the Corporation were fined 5s. and costs. The Corporation were made liable to a penalty of £50. a day in the case of a continuance of the pollution.

Another Necrosis Prosecution.—At Gloucester last week, Messrs. Moreland and Sons, match manufacturers, were summoned under the Factory and Workshops Act for alleged neglect to report to the factory inspector a case of necrosis, and also to send a written notice of the case of phosphorus poisoning to the certified surgeon of the district. The first case was dismissed on the ground that the man affected did not complain to the defendants, and in the second case a fine of 10s. and costs was imposed.

Messrs. C. H. Glover and Co.—This firm are turning their business into a limited liability concern, with a capital of £70,000., divided into 35,000 5½ per cent. cumulative preference shares of £1. each, and 35,000 ordinary shares of £1., the latter being allotted to vendors in part payment of purchase price. Subscriptions are invited from July 4th to 7th for the preference shares and 30,000 4 per cent. first mortgage debentures of £100. each. The Company is formed for the purpose of taking over as going concerns and amalgamating :—*a*. The business of C. H. Glover and Co., Hatcham Saw Mills and Wharves, Timber Merchants and Importers and Box and Packing Case Manufacturers, which was established about 60 years ago. It is the oldest Box Case Manufactory in London and was acquired by the present proprietors in the year 1876, from which date to the present time it has been continuously progressive. *b*. The business of the Acme Box and Case Company (forming a City branch) carried on at Lion Saw Mills, Spitalfields. *c*. The business of the Albion Box and Case Company, Clack Street, Rotherhithe, adjoining the Surrey Commercial Docks. The above firms employ upwards of 250 hands, and do a large business with the War Office, Admiralty, etc.

Cement Works at Llandudno.—Intense alarm and indignation has been excited in Conway and the surrounding district by the threatened erection on the banks of the river Conway, near Glan Conway, and Llandudno Junction, of a large "chemical" works, which in reality is nothing worse than a cement works, and the leading men, who have in the aggregate spent many thousands of pounds in the purchase of beautiful building sites and the erection of fine mansions all around and close to the site of the proposed "chemical" works, are voicing their prospective woes in the local paper, predicting the ultimate disappearance of all the sylvan glories of the land for a distance of about twenty miles round the centre owing to the destructive effects of the effluvia and outpourings of the "chemical" works, and the reduction of the now beautiful scenery to the condition of that round Runcorn and Widnes, which many of them say at one time in their recollection was as full of beauty as the banks of the Conway are now. "Whether any effective steps can be taken to stop the threatened vandalism or not does not appear to be clear, but it is certain that the general feeling of the community is fiercely against the establishment in the neighbourhood of the proposed works." Indeed ! Indeed ! ! The rhetoric is lovely, and the accuracy of the whole rivals the recent war telegrams, but apparently the "leading men" have been "misled." We are sorry to thus rob the local scribe of his triple armour by destroying the justness of his diatribe.

Market Reports.

TAR AND AMMONIA PRODUCTS.

The position of benzols is depressing in the extreme, there only being a halfpenny difference between 90's at 10d. and 50/90's, the advantage lying with the latter. There is a fairly good prospect in carbolic acids, and prices are firm. Naphthas unchanged. Creosote is moving well, but anthracene is more than dull. Pitch is disappointing, prices remaining at 21s. to 22s. 6d. f.o.b. East Coast.

Sulphate of ammonia has been bought fairly well for covering purposes at full prices, and the market closes steady at an advance at all ports. There is no prompt quotation for Beckton, but £9s. 5s. is named for Oct./Dec. delivery. Closing prompt values at other ports are :—London outside makes, £9. 6s. 3d. ; Liverpool, £9 7s. 6d. Hull, £9. 6s 3d. ; and Leith, £9. 6s 3d. to £9. 7s. 6d. Nitrate steady.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is general quietness The demand for caustic soda is again rather slack, and forward purchases could be made upon easier terms. Spot prices, however, are unaltered, viz. : f.o.b. Liverpool 77%, £8 5s. ; 74%, £8. ; 70%, £7. 2s. 6d. ; 60%, £6. 2s. 6d. nett, 10 ton lots Ammonia alkali, soda crystals, and bicarbonate remain firm at current quotations. Bleaching powder is still quiet at £5. free on rails maker's works, and £5. 10s. to £5 15s. hardwoods, f.o.b. Liverpool. Saltcake steady at 24s. bulk f.o.r. Sulphur steady at £4. 10s. per ton. For sulphate of copper price is slightly higher, at £15. 17s. 6d. to £16. f.o.b., but there is no large bulk of business doing. Chlorate of potash 3¼d. Soda 3⅝d. per lb. Superphosphates are in good request, and nitrate of soda firm at 7s. 6d. per cwt. Acetate of lime is rather easier ; brown at £5. 2s. 6d. c.i.f. ; grey, £7. per ton. For sugar of lead there is only small inquiry. Acetate of soda dull at £11. c.i.f. Acetic acids unchanged. White powdered arsenic flat at £16. 10s. f.o.r. for best brands. Potash, caustic and carbonate, are in good demand, but without alteration in values. Prussiate of potash firm at 6¾d. Soda, 5¼d. per lb. Cyanide, 1s. 2d. per lb. Oxalic acid 3⅛d. to 3¼d. per lb. Carbolic acid, liquid and crystals, are in better request and prices are firm. In borax and boracic acid there is no improvement.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron firm : Scotch warrants closed at 45s. 11d. ; Middlesbro', 40s. 1d. cash ; and hematite, 50s. 4½d. Copper firm : Chili bars, G.O.B.'s and G.M.B.'s, closed at £49. 17s. 6d. to £50. 2s. 6d. cash, and £50. 3s. 9d. to £50. 8s. 9d. three months. Tin steady : Straits closed at £60. 12s. 6d. to £70. 2s. 6d. cash, and £70. to £70. 10s. 0d. three months; Australian, £70. 5s. ; English ingots, £72. 5s to £72. 10s. 0d. ; Lead steady; Spanish, £13. 5s. to £13. 7s. 6d. ; English, £13. 10s. 0d. ; Silesian spelter, ordinary, £20. to £20. 2s. 6d. Nickel, 1s. 2½d. Antimony, £37. 0s. to £38. Quicksilver : First hands, £7. 12s. 6d. ; second hands, £7. 12s *Copper shares* steady : Cape, 4⅝ to 4¾ ; Copiapo, 2⅛ to 2⅛ ; Libiola, 1⅞ to 2⅛ ; Mason and Barry, 3⅝ to 3⅞ ; Rio Tinto, 25⅞ to 26 ; Tharsis, 6 to 6¼.

GLASGOW, Wednesday.—Market firm, and a good business ; Scotch done at 45s. 11d. to 45s. 11½d. cash and 46s. 1½d. month; buyers, 45s. 11d. cash ; sellers, ½d. higher ; Cleveland done at 40s. 2d. to 42s. 2½d. month ; buyers, 40s. 1d. cash ; sellers, ½d; more. Cumberland hematite done at 50s. 5d. cash, and 50s. 7½d. to 50s. 8d. month ; buyers, 50s. 4½d. cash ; sellers, 50s. 5d. Middlesbrough hematite idle.

REPORT ON MANURE MATERIAL.

The market has been quiet, and although quotations for phosphatic material are unaltered actual values are barely maintained.

Florida Rock 77/80% is quoted 6½d. per unit, c.i.f., good U.K. ports, 1899 steamer shipment, and South Carolina and 58/63% Algerian, same shipment, 6⅛ per unit.

Buyers of River Plate bones, summer autumn shipment, have not responded to recent quotations, and actual value is probably not over £4 5s to £4 7s. 6d. per ton, delivered at good U.K. ports. From store £4. 10s per ton is quoted for fine East Indian bone meal, but for parcels afloat 1/3 to 2/6 per ton less would probably be business.

Nitrate of soda is firm all round, the statistical position being strong, and freights being 30/- to 27/6 per ton, according to loading date, to coast for orders. On spot, ordinary quality is selling at 7/7½d. per cwt., and refined at 7/7½d. per cwt.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is easier, and as the result more business has been done, sales including Accra at £18. 5s. quay and Cameroon £18. 10s. transit. Olive is steady on spot, Spanish being held for £28. to £30. per tun. Arrivals are dearer on account of the new duty of 2½% on Spanish produce, this impost being equal to an increase of 12s. 6d. per tun. Linseed remains firm at 18s. to 18s. 6d. per cwt. for Liverpool makes in export casks. Cottonseed is steady at the reduction, Liverpool refined standing at 15s. 9d. to 16s. 3d. per cwt. Castor oil is in good demand, and steady, with good seconds Calcutta 3⅜d., first pressure French 3⅛d. to 3¼d, and Madras 3⅛ per lb. Tallow is dull and slow of sale, with prices on the decline. Resin is steady, but the business doing is very small. Spirits of turpentine have settled down to 22s. cwt., sellers being steady thereat. Petroleum steady. American 5⅜d. to 7¼d., and Russian refined 5d. per gallon.

CAKES.—Imported descriptions have been in slightly better request, moderate sales of American Western linseed on the spot having been reported at £5. 12s. 6d. to £5. 17s. 6d., whilst in Liverpool makes the business passing has again been on a rather limited scale, and the quotations are rather in buyers' favour at £7. 10s. to £8. 10s. per ton. Good to choice brands of American decorticated cottonseed have sold to a moderate extent at £5. 7s. 6d. to £5. 17s. 6d., according to quality, but there has been only a small demand for Liverpool makes at £6. to £7 per ton. Undecorticated Liverpool makes have been in small request, but values are without change, with sellers still asking £4. 2s 6d. to £5., according to brand. Egyptian on the spot have met a little more inquiry, and the quotation is maintained at £3. 10s. to £3 15s. per ton, according to make, with a steady tone ruling thereat.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s., seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The value of oils has been well maintained in face of the limited demand which necessarily arises towards the end of each half year. The imports for the year as against the same time a year ago, have been: linseed, 166,584 qrs, against 305,862 qrs.; rapeseed, 37,375 qrs, against 51,878 qrs.; cottonseed, 109,352 tons, against 107,185 tons; cloverseed, 45,163 cwts., against 27,090 cwts; oilcake, 8,221 tons, against 6,396 tons; olive oil, 3,496 tuns, against 2,905 tuns; tar, 944 barrels, against 150 barrels, of which stocks are exceeding light. Linseed oil closes firm spot and month 16s. per cwt naked; forward, 15s. 3d. last four months asked, and 15s. 10½d. July/August. Boiled and refined £1. to £1. 10s. per ton extra. Refined cotton oil steady, spot naked and to August 13s. 10½d.; forward Nov./April 13s. 6d. asked; crude spot firm, and to August 12s. 9d. buyers. Ordinary casks £1, and barrels £1. 10s. per ton extra. Castor oil extracted here unchanged, whilst quotations from Marseilles, first pressure, £27. prompt; £26. 10s. July; £26. July/December; in cases £2. 10s. to £6 10s. extra. From the same source olive oils are quoted Gioja, £30.; Gallipoli, £30. Advices from Italy quote olive soaps a further advance of 10s. per ton, making quotations c.i.f. here £16. 10s. per ton. Cod oils unchanged from £16. to £18. per ton. Choicest Danish butter, 90s.; Swedish, 90s.; Dutch, 84s.; Russian, 65s. to 85s. per cwt.

CAKES.—The demand here is almost nil, many of the largest crushers being closed. Linseed cakes quiet, 95% pure, £7. 5s. to £7. 7s. 6d. Russians, £6. 17s. 6d. to £7. 2s. 6d. Oilcakes (linseed), £6. 7s. 6d. Cotton cakes, a firm market but the demand is dull: best makes, £4. 2s. 6d. to £4. 3s. 9d.; seconds, 2s. 6d. less. Decorticated, £5. 17s. 6d. to £6. Meal, £6. 5s. Rape cakes, none.

PAINTS.—Makers continue to experience good business, leaving room for some improvement however in the export departments. Prices unchanged. Disinfecting powder, 5% carbolic, £3.; 10%, £3. 10s. Sanitary fluid, 10d. to 1s. per gallon. Pinolia sanitary fluid, 2s. 6d. per gallon. Black varnish, £5. per ton in barrels.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The resolution of the Petroleum Committee (narrowly carried though it has been), with reference to amendment in the regulations for the traffic and use of burning oil, has distinctly contributed good heart to the Scottish mineral oil industry. Its burning oil is already of a high flash point, and unquestionably the value of it would be immediately enhanced if the low-flash American oils were fiscally forbidden the U.K. market. Even a rise so low that the poorest of the consumers would scarcely feel it would be a boon to the industry as a whole. An assured advance of, say one-eighth of a penny per gallon, would mark a great difference on the gross revenue for the year, so very large is the output. Meanwhile all mineral oils and solid paraffin remains at the old figures, but firm at these, particularly in the cases of lubricating oils and paraffin spirit. Sulphate of ammonia mended all last week up to £9. 5s. prompt, Leith, or more. Ordinary chemicals continue quiet. Prices unaltered.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett Tyne, soda ash, 48/52°, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, 48/52°, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 10s. to £5. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 2s. 6d., 60/62° £6. 2s. 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s. 0d. nett, Tyne; saltcake, 25s 0d. borax, English, refined, £14., and boracic acid, £24. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 12s. 6d., and 1-cwt. casks £7, nett, Liverpool; bichromate of potash, 3¾d., nett for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); bichromate of soda, 3d. nett, for Scotch and English deliveries (for export, 2¾d. nett, f.o.b. Glasgow); chlorate of potash, 3¼d. less 5%, Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £9. 3s. 9d. to £9. 5s. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £15. 15s. less 5% any port; paraffin scale, hard, 1⅜d. to 1½d. per lb., soft, 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb.; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 5¾d., and crystal, 6d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 194, hogsheads, 191 barrels, and 1,303 casks; also 5,901 bags, all beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

There is very little alteration in chemicals, but sulphur is scarce and is quoted at £5. per ton. Soda crystals are in good demand at £2. 12s. 6d. per ton, gross weight locally. Caustic, 70%, £7. 5s to £7. 10s. per ton; 76/77%, £8. 5s. to £8. 10s. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett; do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8. 10s. and 70% £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. 0s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; chlorate of potash, 3¼d. per lb., less 6% f.o.b. Liverpool; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do. 90/95% crude calcined, £6. per ton nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt in good demand at 9s. 6d. to 10s. per ton, f.o.b. Tees.

COALS.—The coal trade is rather quieter to-day owing to more abundant supplies, but prices continue pretty firm. Gas coals are steady and should soon be in heavier demand for export. Coke very firm for local and export. Best Northumbrian steam, 13s. to 13s. 3d. per ton; second qualities, 12s. to 12s. 3d. per ton; small steam, 5s. 6d. to 6s. per ton; bunker coals, 9s. 3d. to 9s. 9d. per ton; gas coals, 10s. to 11s. per ton; household coal, 10s. to 11s. per ton; coke, 18s. to 21s. per ton.

New Companies.

J. Sellers & Son, Ltd.—CAPITAL £15,000. in £1. shares. This company has been formed to acquire and carry on the business of fish salesmen and merchants, salt, cutch and ice merchants, smack and fishing vessel owners, etc., carried on by W. T. Sellers and T. Whitehead, at Scarborough, Yorks, as J. Sellers and Son, and to adopt a certain agreement. The subscribers to the memorandum of association are:—W. S. Robinson, 9, Candler-street, Scarborough, chartered accountant; A. W. Stephenson, 32, Livingstone-road, Scarborough, clerk; T. Whitehead, 4, Barwick-street, Scarborough.

fish salesman; Mrs. M. Whitehead, 4, Barwick-street, Scarborough; W. T. Sellers, 15, Sand-street, Scarborough, fish salesman; Mrs. W. T. Sellers, 15. Sand-street, Scarborough; E. W. Davis, Scarborough, chartered accountant.

Turner Paper Mill Co., Ltd.—Capital £80,000. in 5,000 6% cum. pref., 4,040 ordinary, and 6,960 deferred shares of £5 each, to carry on the business of paper manufacturers, and manufacturers of and dealers in wood pulp, chemical wood pulp, paper pulp, half stuff, and other paper making materials. The subscribers to the memorandum of association are:—J. W. Lees, Greengate Brewery, Middleton Junction, nr. Oldham, brewer; J. Newsome, 52, Major-street, Manchester, hop merchant; E. Newsome, 52, Major-street, Manchester, hop merchant; W. G. Groves, Windermere, brewer; E. Holt, Woodthorpe, Prestwich, brewer; J. Turner, Paper Mill, Rawcliffe Bridge, Yorks.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J. Parkin and A. Roberts, manufacturing chemists, and oil and tallow refiners, Heckmondwike, under the style of Joseph Parkin & Co.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 18th.

Acetate of Lime—
U. States, 228 pks. Johnson & Hooper

Acetic Acid—
Belgium, 19 pks. Beresford & Co.
,, 19 T. H. Lee
Germany, 21 Argo S. S. Co

Acids—
Holland, 20 pks. F. C. Devon & Co.

Alkali—
Belgium, 1,080 c. R. Waters
Holland, 1,660 ,,
Germany, 16 J. Barber & Co.

Ammonium Nitrate—
Holland, £30 Petri Brs.

Asbestos—
Germany, £40 Craven & Co
Italy, 394 Imperial Asbestos Co.
,, 19 W. Newbold & Co.
,, 312 Britis-h Asbe-tos Co
,, 710 Cape Asbestos Co, Ld.
,, 500 Pickford & Co
,, 31 C. Lindley
Holland, 6 Robinson, Roberts & Co.

Barytes—
Belgium, 250 pks T. Harrison
,, 115 J. L. Lloyd & Co.
Holland, 46 Taylor Brs.
,, 170 Union L. Co, Ld.
U. States, 488 F. Tink
Germany, 39 Wilkinson, Heywood & Co.
,, 300 Capes & Self
,, 57 W. Harrison & Co.
Belgium, 72 ,,
,, 47 J. L. Lyon & Co.

Benzoic Acid—
Germany, 1 pk. R. W. Greeff & Co.

Bones—
Melbourne, 2 t. Culverwell, Brooks & Co
,, 17 Dyster Nald r & Co.
Sydney, 14 C. M. Lampson & Co.
,, 11 Hicks, Nash & Co.
Germany, 38 E. Groschke
Canaries, 8 A. & W. Nesbitt
N. Russia, 60 Anglo-Contl. Guano Wks.

Bromine—
Germany, £73 A. & M. Zimmermann
10 pks.

Calcium Sulphite—
Germany, £30 Petri Brs.

Caoutchouc—
Holland, 26 c. Prop. Hay's Wf.
Germany, 10 Hoare, Wilson & Co.
France, 40 Girard Brs. & Co.
Portugal, 2 L. & I. D. Jt. Co.
Bengal, 12 ,,
,, 50 Anderson, Weber & Smith
,, 150 Huttenbach & Co.
,, 133 Gilman Brs & Co.
,, 27 Elsan & Co.
,, 171 Kleinwort, Sons & Co.
,, 443 L. & I. D. Jt. Co.

Carbonic Acid—
Holland, 15 pks. Morrison Pollexfen & Co.

Castor Oil—
Madras, 75 cs. L. & I. D. Jt. Co.
Italy, 30 J. Knill & Co.
France, 11 pks. F. Boehm
, 108 brls. Mordaunt Bros.
Belgium, 6 cs. T. H. Lee
Italy, 20 Stebbing & Co.
,, 60
,, 51 C. Wix & Sons
,, 10 A. & M. Zimmermann
,, 25 Barron, Harveys & Co.

Caustic Potash—
Germany, £200 J. M. Steel & Co.

Caustic Soda—
Germany, 6 c. Butler's Wf, Ld.

Chemicals (*otherwise undescribed*
France, £132 Mory & Co.
,, 52 J. M. Steel & Co.
Germany, 40 Craven & Co
,, 98 R. W. Greeff & Co.
Holland, 5 Langstaff & Co.
,, 50 T. H. Lee
Belgium, 248 ,,
,, 9 T. Palmer
,, 46 John Cockerill Line
Calcutta, 20 G. H. Wilson & Sons
Germany, 46 Butler's Wf., Ld.
Belgium, 8 Sawer, Sons & Co.
Norway, 225 R. Greening
Melbourne, 500 L. & I. D. Jt. Co.
Germany, 60 ,,
,, 30 T. H. Lee
,, 852 A. & M. Zimmermann
Holland, 8 ,,
,, 14 R. W. Greeff & Co

Citrate of Lime—
Italy, 50 pks. B. Jacob & Sons

Citric Acid—
France, 4 pks. C. Christopherssen & Co
Italy, 40 J. Puddy & Co.

Cream of Tartar—
France, 8 pks. C. Atkins & Nisbet
,, 5 F. C. Devon & Co.
,, 18 W. C. Bacon & Co.
,, 2 G. S. N. Co.
,, 5 B. & F. Wf. Co.

Dyestuffs—
Cochineal
Canaries, 15 pks. W. M. Smith & Sons
,, 8 Kuhner, Henderson & Co.
,, 2 Swanston & Co
Cutch
Straits, 500 pks. Borneo Co., Ld.
,, 100 Ker. Bolton & Co.
U. States, 500 H. A. Litchfield & Co
Extracts
Germany, 10 pks. T. H. Lee
France, 35 B. & F. Wf. Co.
Germany, 12 L. & I. D. Jt. Co.
,, 6 Butler's Wf., Ld.
France, 11 J. Harrison
Canada, 130 Boutcher Mortimore & Co.
,, 70 Furness, Withy & Co.
,, 200 Benekendorff Berger & Co.
Gambier
Straits, 272 pks. Prop. Hay's Wf
,, 499 Bellamy's Wf. Ld.
Indigo
Madras, 29 chts. L. & I. D. Jt Co.
,, 43 P. Macfadyen & Co.
,, 8 H. Johnson & Sons
,, 7 J. Forsey
Belgium, 8 cs. A. Frey & Co., Ld.
Myrabolams
Bengal, 2,000 pks. P. & O. Co.
,, 1,000 Montgomerie & Workman
Saffron
Spain, 2 pks. C. Brumlen
Shumac
Italy, 100 pks. H. Johnson & Sons
Tanners' Bark
Cape, 43 t. F. Huth & Co.
,, 130 J. T. Rennie, Son & C

Turmeric
Bombay, 78 pks. Major & Field
,, 187 L. & I. D. Jt Co

Dyestuffs (*otherwise undescribed*)
France, 8 pks. W. Burton & Sons

Farina—
Italy, 420 pks. C. Tennant Sons & Co.
Holland, 800 R. Bennett & Co.
,, 200 G. Hornzee
Belgium, 1 Leach & Co.
,, 2 John Cockerill Line
Italy, 33 T. Ronaldson & Co.

Felspar—
Sweden, £10 C. Reiersen

Glucose—
U. States, 200 pks. 965 c. L. & Til. Lige Co.
,, 1,285 4,910 R. G. Hall & Co.
France, 200 200 Barrett Tagant & Co.

Glue—
U. States, 413 H. Johnson & Sons
France, 84 Bennett S. S. Co.
Germany, 280 Phillipps & Graves
Italy 75 Greenberg & Sons
Germany, 45 L. & I. D. Jt. Co.
,, 160 C. A. Nichols
France, 70 T. H. Lee
N. Russia, 315 M. H. Voss

Glue Stock—
Germany, 91 bgs. 8 bls. Hicks, Nash, & Co.
,, 83 Prop. Bull Wf., Ld.
,, 743 W. Balchin, Ld.
Belgium, 118 Leach & Co.
Sydney, 4 Goad. Rieg, & Co.
,, 11 Dyster, Nalder, & Co
Holland, 202 Hernu, Peron, & Co.

Glycerine—
Germany, £25 R. W. Greeff & Co.

Guano—
Peru, 112 t. Anglo-Contl. Guano Works

Gypsum—
Germany, 155 t. London Portland Cement Co.

Infusorial Earth—
Germany, £250 A. Haacke & Co.

Iron Chloride—
Holland, £50 Hernu, Peron, & Co.

Lead Acetate—
Germany, £50 Petri Brs.
,, 120 Beresford & Co.
,, 110 pks. ,,

Manganese Ore—
Germany, 1 t. Honychurch & Co.

Manure—
U. States, 19 t. R. G. Hall & Co.

Mercury—
Italy, 100 flsks. H. Bath & Son
,, 500 btls. L. & I. D. Jt. Co.
Spain, 5,000 flsks. N. M. Rothschild & Son

Mica—
E. Indies, £620 W. M. Smith & Sons
,, 172 A. B. Curtis & Co.

Molasses—
U. States, 100 brls. 550 c. G. Hornzee
,, 25 138 Ohlenschlager Brs.

Naphtha—
France, 20 dms. E. J. Catlin

Ochre—
Holland, 18 pks Phillipps & Graves
France, 155 W. Harrison & Co.

Paraffin Scale—
U. States, 1,614 brls. Anglo-American Oil Co.
,, 24 L. & Til. L. C. & D. Co.

Paraffin Wax—
U. States, 20 brls. G. H. Frank
,, 100 cs. Anglo-American Oil Co.

Pearl Ash—
France, 200 c. F. W. Berk & Co., Ld.

Phosphate of Lime—
France, 200 t. Anglo-Contl. Guano Works
Holland, 180 West & Penrose

Pitch—
Germany, 43 cks. Poth Hille, & Co.
Belgium, 9 ,,

Plumbago—
Germany, 20 bgs. Brown & Elmslie
U. States, 45 pks. Lunham & Moore
Ceylon, 297 brls. Lon. & Til. Lige. C & D. Co.
,, 38 Wrightson & Son
, 290 J. Thredder, Son, & Co
,, 36 W. H. Sampson
Germany, 8 Fellows, Morton, & Co.
,, 37 B. Gallaway

Potash—
Germany, 200 c. J. M. Steel & Co.
Canada, 83 C. Fox

Potassium Bicarbonate—
Holland, 40 c. A. & M. Zimmermann

Potassium Carbonate—
Germany, 180 c. Petri Brs.
,, 100 Beresford & Co.
France, 120 W. E. Cole

Potassium Oxymuriate—
Sweden, 160 c. G. Boor & Co.

Potassium Permanganate—
Germany, 5 pks. R. W. Greeff & Co.

Pyrogallic Acid—
Germany, 2 pks. R. W. Greeff & Co.

Rosin—
France, 10 cks. C. W. Schmidt

Salicylic Acid—
Germany, 5 pks. Butler's Wf., Ld.

Saltpetre—
E. Indies, 305 bgs. Lucas & Spencer's Wf.
Belgium, 85 J. Greig
Germany, 33 pks. P. Hecker & Co.
,, 16 cks. ,,
,, 43 L. & I. D. Jt. Co.
,, 30 J. Hall & Son, Ld.

Soap—
U. States, £120 May, Roberts, & Co.
France, 46 Bennett S. S. Co.

Soda—
Holland, 150 c. W. Harrison & Co.
U. States, 2,000 F. Fink
Belgium, 400 Sawer, Sons, & Co.
Holland, 200 R. W. Greeff & Co.

Sodium Hypochlorite—
Germany, 140 c. H. Lambert

Sodium Hyposulphite—
Belgium, 106 c. W. Slimmon

Sodium Sulphate—
Germany, £35 H. Wallace & Co.

Starch—
Belgium, 920 pks. Becker & Wagner
France, 20 W. E. Cole
U. States, 2,400 J. Forsey
,, 450 R. G. Hall & Co.
,, 637 C. Tennant, Sons, & Co.
,, 100 E. & T. Pink

Holland, 40 J. Forsey
" 1,623 Little & Johnson
" 200 Phillipps & Graves
" 1,040 A. B. Curtis & Co
Belgium, 508 T. H. Lee
" 200 Union Ltge. Co., Ld.
Germany, 6 Butler's Wf., Ld.
" 350 Seaward Brs., Ld
Belgium, 160 Taylor Brs.
Holland, 1,040 A. Starck
Belgium, 200 J. Barber & Co.
" 200 Seaward Brs., Ld.
France, 200 Prprs. Dowgate Dk.
Belgium, 191 F. Claydon & Co.
" 850 E. & T. Pink
" 200 J. Harrison

Stearine—
Holland, 51 bls. J. Owen
France, 120 bgs. H. Hill & Sons
Belgium, 317
" 25 G. Johnson & Sons

Sulphur—
Italy, 47 t. Taylor Brs.
" 300 Brandram Brs. & Co
" 9 H. B. Alder & Co.

Tallow—
Sydney, 26 cks. Aust. Meat Co.
" 685 Goad, Rigg, & Co.
Channel Is., 10 "
Belgium, 4 T. H. Lee
France, 50 C. S. Lovell
Melbourne, 15 J. Terry & Co.
" 65 Cuthbert & Hall
U. States, 315 Price's Pat. Candle Co.
Holland, 6 J. Owen
Belgium, 2 Sawer, Sons, & Co
Melbourne, 936 Phillipps & Graves
U. States, 88 Beresford & Co.
" 83 Colchester & Woolner
Melbourne, 374 Elkan & Co.
Sydney, 209 "
" 120 J. E. Scott
" 278 Watson's Wf., Ld.
N. Zealand, 200 Goad, Rigg, & Co.
" 300 Phillipps & Graves
U. States, 600 "
" 100 Prod. Brokers' Co.
Holland, 58 A. F. Gardiner
Sydney, 337 Union Ltge. Co.
" 29 Deering & Robottom
" 637 Phillipps & Graves
Queensland, 3 Dalgety & Co

Tar—
Germany, 10 cks. Blagden, Waugh, & Co.

Tartaric Acid—
Holland, 6 pks. B. & F. Wf Co.
" 17 F. C. Devon & Co.

Ultramarine—
Belgium, 21 pks. J. Harrison
" 13 W. Harrison & Co
Germany, 20 J. Kitchin, Ltd.
Holland, 3 J. Barber & Co
" 7 Haeffner, Hilpert, & Co.
" 25 Thames S. T. & L. Co., Ld.

Varnish—
Germany, 4 pks. Butler's Wf., Ld.
" 7 L. & N.-W. Rly. Co.
France, 2 Girard Freres & Co.

White Lead—
Holland, 68 pks. W. Balchin, Ld.
" 37 N. J. Fenner & Co.
Belgium, 52 J. R. Francis & Co.
" 45 J. L. Lyon & Co.
" 46 T. & W. Farmiloe Ld.
Germany, 12 H. Lambert

Wood Pulp—
Holland, 26 pks. H. Johnson & Sons
Belgium, 179 Becker & Wagner
U. States, 493 "
Sweden, 320 W. G. Taylor & Co., Ld.
" 511 Caima Wood Pulp Co.
" 200 Tough & Henderson
" 901 London Paper Mills Co.
Germany, 60 Butler's Wf., Ld.
U. States, 55 Beck & Pollitzer
Holland, 300 Robinson, Roberts & Co.
Germany, 179 M. D. Co.
Norway, 1,687 W. G. Taylor & Co., Ld.
" 1,920 Christophersen, Andrews, & Co.
" 120 Becker & Co.
" 1,200 J. Sharpe
Canada, 2,636 Furness, Withy & Co.
Norway, 83 M. D. Co.
Sweden, 180 Christophersen, Andrews, & Co

Zinc Oxide—
Germany, 6,130 R. W. Greeff & Co.
U. States, 200 pks. Wilson & Furness Co.
Holland, 140 M. Ashby, Ld.
U. States, 400 "
Germany, 150 "
" 95 Soundy & Sons
Holland, 8 J. Owen
" 25 J. Walter & Co.
France, 40 C. S. Lovell

Zinc Sulphate—
Germany, £62 Burgoyne & Co

LIVERPOOL.

Week ending June 16th.

Alkali—
Hamburg, 14 dms.

Alumina Hydrate—
Rotterdam, 20 cs.

Barytes—
Rotterdam, 54 cks.

Bone Ash—
B. Ayres, 456 bgs. W. B. Dickson

Bone Meal—
Rangoon, 395 bgs.

Bones—
B. Ayres, 123 bgs.
Seville, 294
Ceara, qty.

Borate of Lime—
Lisbon, 1,250 sks.

Borax—
Lisbon, 400 sks. A. S. Henry & Co., Ld.

Caoutchouc—
Barcelona, 5 cs.

Castor Oil—
Calcutta, 258 cs. Ralli Brs.
" 150

Colours—
Hamburg, 2 cks 5 cs.
Rotterdam, 191 8
Antwerp, 8
Stettin, 39

Copper Oxide—
Rotterdam 2 cks.

Cottonseed Oil—
Baltimore, 200 brls.

Cream of Tartar—
Barcelona, 22 cks.
Bordeaux, 38

Dyestuffs—
Alizarine
Rotterdam, 1 brl.
Algarrobilla
Lisbon, 100 sks. Pedro L. Leverin
Cutch
Singapore, 104 cs.
Rangoon, 675 bxs. Baring Brs. & Co.
" 450
Extracts
Halifax, 310 cks. Boutcher, Bacon & Co.
" 71
Bordeaux, 25

Dyestuffs *(otherwise undes.)*—
New York, 56 t. E. Brownbill & Co.

Glucose—
Boston, 400 brls.
" 603 L. Sutro & Co.
New York, 500 "

Glue—
Hamburg, 60 bgs.
Rotterdam, 160
Boston, 20 crts. 10 brls. 1 kg.
Stettin, 40 bskts.

Guano—
Valencia, 43 bgs.

Lamp Black—
Gothenburg, 12 bxs.

Paint—
Hamburg, 40 dms.
Boston, 13 brls. Musson & Co

Paraffin Scale—
New York, 500 brls. Anglo-Am. Oil Co., Ld.

Phosphates—
Seville, 535 sks. H. M. Lean

Pitch—
Gothenburg, 6 brls.

Potash—
Montreal, 24 brls.

Pyrites—
Huelva, 1,763 t. Matheson & Co.

Shellac—
Calcutta, 50 chts.

Soap—
New York, 20 brls.

Sodium Silicate—
Rotterdam, 2 cks.

Sodium Sulphate—
Boston, 6 cks. G. Warren & Co.

Starch—
New York, 940 bgs. L. Sutro & Co.
Rotterdam, 50 cs.

Superphosphates—
Valencia, 1503/4 bgs.

Tallow—
B. Ayres, 625 cks. 432 hf.-pps.
Boston, 905 brls. T. M. Marc & Co.
" 1,132 521 tcs.
New York, 70 159 160 hds.
Rotterdam, 25
Baltimore, 60 E. Valh

Tartaric Acid—
Rotterdam, 6 cks. 5 cs

Turpentine—
Libau, 50 brls.

Varnish—
New York, 3 brls. W. A. Warren

Verdigris—
Bordeaux, 1 ck.

Wood Pulp—
Rotterdam, 152 bls.
Gothenburg 16 G. Schenkenwald & Co
" 7 Tullis & Co.
" 7 R. L. Lundgren

Zinc Oxide—
Hamburg, 25 cks.
Rotterdam, 34 brls.

MANCHESTER.

Week ending June 18th.

Acetate of Lime—
Rouen, 77 bgs

Acetic Acid—
Ghent, 16 crbys.

Acids—
Antwerp, 2 cks.

Alizarine—
Rotterdam. 30 cks.

Ammonium Oxalate—
Hamburg, 1 ck.

Aniline Colours—
Antwerp, 2 cks.
Hamburg, 16
Rotterdam, 15

Aniline Salts—
Rotterdam, 32 cks.

Antimony Salts—
Hamburg, 2 cks.

Barytes—
Antwerp, 10 bgs.
Rotterdam, 100

Cement—
Antwerp, 1,405 bgs.

Chemicals *(otherwise undescribed)*
Rouen, 43 cks

Colours—
Antwerp, 7 cks. J. T. Fletcher & Co.
12 brls.
" 4 cks.
Hamburg, 1 cs.
Rotterdam, { 174 35 / 70 brls
Rouen, 2 cks.

Extracts—
Rotterdam, 5 cks.

Farina—
Hamburg, 100 bgs.
Rotterdam, 1,030
Stettin, 750 Browne, Geveke & Co.
" 300

Glucose—
Stettin, 1,000 bgs.

Glue—
Antwerp, 60 bls.
Stettin, 40 bgs.

Limestone—
Ghent, 1 crte. J. T. Fletcher & Co.

Lithopone—
Rotterdam, 4 cks.

Logwood—
Hayti, 490 t.

Ochre—
Hamburg, 9 cks.

Paint—
Hamburg, 23 cks.

Potash
Hamburg, 10 brls.
Rotterdam 10 cks.

Potassium Muriate—
Hamburg, 40 cks.

Potassium Prussiate—
Rotterdam. 2 cks.

Pumice Stone—
Rotterdam. 11 cs

Sodium Nitrate—
Rotterdam, 8 cks.

Starch—
Antwerp, 223 cs.

Tartar—
Hamburg. 31 cks.

Waste Salt—
Hamburg. qty.

Wood Pulp—
Christiania, 40 bls.
Drammen, 1,060
Gambo, N'fd., 3,000 lds.
Gefle, 10,190 Henderson, Craig, & Co.
Gothenburg, 2,974 bls. 7 pks.
Hamburg, 508
Rotterdam, 152 rolls
Sarpsborg, 6,340 bls. Kellner
Partington P. P. Co.
" 1,000 rolls W. Gallagher & Son
Skien, 2,250 bls.

GLASGOW.

Week ending June 23rd.

Asbestos—
Genoa, 32 pks. 20 cs.

Barytes—
Rotterdam, 90 cks. J. Rankine & Son
50 bgs. 21 pks.

Barium Sulphate—
Antwerp, 36 cks. 550 bgs.

Bleaching Powder—
Rotterdam, 44 cks. J. Rankine & Son

Boracic Acid—
Leghorn, 7 cks

Castor Oil—
Antwerp, 112 cs.
Leghorn, 70

Chemicals *(otherwise undescribed)*
Hamburg, 1 cs.

Colours—
Rotterdam, 11 cks. J. Rankine
2 bxs. 29 brls. 87 cs. & Son

Dried Blood—
Genoa. 6 cs.

Dyestuffs—
Alizarine Colours
Rotterdam 11 cks. J. Rankine
1 cs. & Son
Aniline
Amsterdam. 1 ck. J. Rankine & Son
Aniline Colours
Rotterdam, 6 cks. 5 cs.
Aniline Salts
Rotterdam, 5 cks. J. Rankine & Son
Extracts
Antwerp, 1 ck.
Genoa, 50 brls.
Philadelphia, 50
Shumac
Palermo, 653 bgs.

Farina—
Delfszyhl, 278 bgs. J. Rankine & Son

Glucose—
Montreal, 10 brls.
New York, 150

Glue—
Hamburg, 60 bgs.
Rotterdam, 60 J. Rankine & Son
Antwerp. 2 cks.

Glycerine—
Bordeaux, 20 cks.

Guano—
Christiania, 1 bg.

Gypsum—
Almeria, 22 bgs.

Lead Acetate—
Rotterdam, 54 cks. J. Rankine & Son

Methyl Alcohol—
Antwerp, 6 dms.
Mineral White—
Rotterdam, 6 cks. J. Rankine & Son
Paint—
Philadelphia, 17 bls.
Painters' Colours—
Antwerp, 2 cks.
Phosphate Rock—
Antwerp, 1,020 bgs.
Plumbago—
Hamburg, 17 cks.
Potash—
Dunkerque, 9 cks.
Rotterdam, 106 J. Rankine & Son
Pumice Stone—
Messina, 100 bgs.
Rosin—
Rotterdam, 3 cks. J. Rankine & Son
Soap—
Rotterdam 10 cs. J. Rankine & Son
Leghorn, 25
Soda—
Genoa, 71 brls.
Starch—
Rotterdam, 45 bls. J. Rankine & Son
Antwerp, 120 cs.
Sulphur—
Catania, 2,168 bgs. 76 brls. 39 cks.
Girgenti, 920 t. Thomas Lawrie
Tallow—
Philadelphia, 260 brls.
Tar Oil—
Hamburg, 5 cks.
Tartar—
Bordeaux, 12 cks.
Tartar Emetic—
Hamburg, 7 cks.
Ultramarine—
Rotterdam, 3 cks. J. Rankine & Son
White Lead—
Rotterdam, 10 pks. J. Rankine
96 cks. & Son
Antwerp, 1
Wood Pulp—
Hernosand, 1,200 bls.
Halifax, 356
Christiania, 1,055
Christiansand, 500
Zinc White—
Rotterdam, 60 cks. J. Rankine & Son

HULL.

Week ending June 18th.

Acids—
Ghent, 20 crbys. Wilson, Sons, & Co., Ld.
Ammonia—
Rotterdam, 2 brls. Hutchinson & Son
Arsenic—
Antwerp, 26 cks. Wilson, Sons, & Co., Ld.
Hamburg, 18 pks. ,,
Barytes—
Amsterdam, 20 bgs. W. & C. L. Ringrose
Rotterdam, 100 Reckitt & Sons
Antwerp, 136 cks. Bailey & Leetham, Ld.
,, 104 H. F. Pudsey
Bremen, 23 Veltmann & Co.
,, 249
Bone Meal—
Bombay, 1,000 bgs.
Chemicals *(otherwise undescribed)*
Antwerp, 13 pks. Wilson, Sons, & Co., Ld.
Dunkirk, 30 ,,
Colours—
Antwerp, 36 cs. Bailey & Leetham, Ld.
,, { 30 brls. 9 pks. 19 cks. Wilson, Sons, & Co., Ld.
Ghent, 9 ,,
Christiania, 8 ,,
Rotterdam, { 6 38 pks. 3 brls. Hutchinson & Son
,, 67 pks. W. & C. L Ringrose
Riga, 643 cs Wilson, Sons, & Co., Ld.
Cryolite—
Copenhagen, 41 cs. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 39 pks. Hutchinson Sons, & Co., Ld.
Madder
Rotterdam, 1 ck. Hutchinson & Son
Myrabolams
Bombay, 8,103 bgs.
Valonia
Rotterdam, 1 bg. Wilson, Sons. & Co., Ld.
Dyestuffs *(otherwise undescribed)*
Antwerp, 175 bgs. Bailey & Leetham, Ld.
Farina—
Antwerp, 10 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 700 bls. Hutchinson & Son
Gelatine—
Dunkirk, 5 cs. Wilson, Sons, & Co., Ld.
Glucose—
New York, 37 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 40 bgs. Hutchinson & Son
Glue—
Dunkirk, 24 cks. Wilson, Sons, & Co., Ld.
Hamburg, { 240 bgs. 5 cks. ,,
Rotterdam, 2 Hutchinson & Son
Rouen, 10 bls. Rawson & 29 cks. Robinson
Limestone—
Antwerp, 1 cs. Wilson, Sons, & Co., Ld.
Ochre—
Bremen, 4 pks. Veltmann & Co.
,, 20 cks. Sissons Brs.
Rouen, 7 Rawson & Robinson
Paraffin Wax—
New York, 50 bgs. Wilson, Sons, & Co., Ld.
Phosphates—
Ghent, 150 t.
Soap—
Boston, 170 brls. Wilson, Sons, & Co., Ld.
St. Petersburg, 5 cs. ,,
Soda—
Antwerp, 33 pks. Wilson, 100 bgs. Sons, & Co., Ld.
Ghent, 120 ,,
Starch—
Amsterdam, 200 cs. Hutchinson & Son
Antwerp, 36 Bailey & Leetham, Ld.
,, 100 Wilson, Sons, & Co., Ld.
Bremen, 2,292 Veltmann & Co.
Ghent, 372 Wilson, Sons, & Co., Ld.
Rotterdam, 134 Hutchinson & Son
Stearine—
Rotterdam, 1 cs. Reckitt & Sons
Tallow—
Boston, 150 tcs. Wilson, Sons, & Co., Ld.
Dunkirk, 231 ,,
Hamburg, 25 ,,
Tartar—
Bordeaux, 23 cks. Rawson & Robinson
Tartaric Acid—
Antwerp, 1 ck Bailey & Leetham, Ld.
Rotterdam, 6 Hutchinson
2 brls. & Son
Tin Oxide—
Amsterdam, 7 cks. Hutchinson & Son
Turpentine—
Bordeaux, 2 cks. Rawson & Robinson
Ultramarine—
Rotterdam, 12 cks. Hutchinson & Son
Varnish—
Gothenburg, 1 ck. Wilson, Sons, & Co., Ld.
White Lead—
Antwerp, 24 cks. Bailey & Leetham, Ld.
Rotterdam, 29 W. & C. L. Ringrose
,, 30 Hutchinson & Son
Wood Pulp—
Boston, 208 bls. Wilson, Sons, & Co., Ld.
Christiania, { 974 pks. 10 cs. ,,
Drontheim, 740 bls. ,,
Gothenburg, 69 bls. ,,
Hamburg, 40 Bailey & Leetham, Ld.
Helsingfors, 342 J. Good & Sons

TYNE.

Week ending June 18th.

Antimony Ore—
Tampico, 535 bgs.
Barytes—
Antwerp, 500 bgs. Tyne S. S. Co.
Rotterdam, 28 cks. ,,
Bleaching Powder—
Rotterdam, 215 cks.
Colours—
Antwerp, 1 ck. Tyne S. S. Co.
Hamburg, 10 cs. ,,
Limestone—
Antwerp, 16 crts. Tyne S. S. Co.
Linseed Cake—
St. Petersburg, 212 t. 15 c.
Paint—
Antwerp, 4 cs. Tyne S. S. Co.
Potash—
Antwerp, 1 cs. Tyne S. S. Co.
Pyrites—
Huelva, 1,865 t. Tharsis Sulphur & Copper Co.
Saltpetre—
Hamburg, 12 cks. Tyne S. S. Co.
Silver Ore—
Copenhagen, 3 cs.
Soap—
Montreal, 98 cs. Cairns, Young, & Noble
Rotterdam, 3 Tyne S. S. Co.
Starch—
Antwerp, 8 cs. Tyne S. S. Co.
Rotterdam, 161 ,,
Stearine—
Antwerp, 7 bgs. Tyne S. S. Co.
Superphosphate—
Pernau, qty.
Varnish—
Rotterdam, 4 cks. Tyne S. S. Co.
White Lead—
Antwerp, 33 cks. Tyne S. S. Co.
Wood Pulp—
Christiania, 420 bls.
Gothenburg, 68 pks.
Zinc Ore—
Tampico, 539 sks.
Zinc Oxide—
Rotterdam, 28 cks. Tyne S. S. Co.

GOOLE.

Week ending June 15th.

Alizarine—
Rotterdam, 65 cks.
Alkali—
Calais, 3 cks.
Aniline—
Rotterdam, 179 cks. 54 cs.
Antimony—
Boulogne, 1 ck.
Barytes—
Antwerp, 140 bgs.
Rotterdam, 50
Caoutchouc—
Boulogne, 11 cks. 1 cs
Chemicals *(otherwise undescribed)*
Hamburg, 7 cs.
Dyestuffs *(otherwise undescribed)*
Antwerp, 299 bgs. 1 cs.
Boulogne, 104 cks. 1
Rotterdam, 152 16
Farina—
Delfszyhl, 955 bgs.
Hamburg, 250
Glucose—
Calais, 100 bgs.
Glue—
Antwerp, 9 cks. 2 bls.
Ghent, 1
Indigo—
Rotterdam, 1 ck.
Phosphates—
Dunkirk, 3,700 bgs.
Potash—
Calais, 2 dms.
Dunkirk, 10 cks. 20
Hamburg, 24
Rotterdam, 10
Saltpetre—
Hamburg, 24 cks.
Rotterdam, 200 bgs.
Sodium Sulphate—
Rotterdam, 13 dms.
Starch—
Ghent, 46 bxs.
Tartaric Acid—
Rotterdam, 2 cks.
Waste Salt—
Hamburg, { 250 cks. 190 t.

GRIMSBY.

Week ending June 18th.

Albumen—
Hamburg, 6 cks.
Alkali—
Hamburg, 4 pks.
Barytes—
Rotterdam, 100 bgs.
Caoutchouc—
Antwerp, 2 cs.
Hamburg, 1
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 1 cs. 1 pk.
Rotterdam, 45
Colours—
Antwerp, 9 cks. 11 cs. 44 pks.
Hamburg, 30 18 28
Rotterdam, 6 1 bx.
Dyestuffs—
Extracts
Antwerp, 5 pks.
Hamburg, 13
Dyestuffs *(otherwise undescribed)*
Antwerp, 210 bgs.
Farina—
Hamburg, 100 bgs.
Glue—
Antwerp, 7 bgs.
Size—
Rotterdam, 10 cs.
Starch—
Antwerp, 110 cs.
Zinc Ashes—
Antwerp, 17 cks.

EXPORTS OF CHEMICAL PRODUCTS
OF THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 22nd.

Acetic Acid—
Algoa Bay, 10 cs. £37
Acids—
Cape Town, 32 cs. £28
Alkali—
Lyttleton, 7 t. 14 c. £35
Alum Waste—
Calcutta, 41 t. 8 c. £101
Ammonia—
Cape Town, 20 cs. £29
Ammonium Carbonate—
Rouen, 5 t. 15 c. £140
New York, 25 kgs. 3
Melbourne, 7 1

Ammonium Chloride—
Rodsto, 1 t. £65
Ammonium Muriate—
St. Petersburg, 2 t. £34
Ammonium Sulphate—
Hamburg, 100 £906
Colombo, 10 103
Amsterdam, 100 900
Barbadoes, 50 1 c. 477
Amorphous Phosphorus—
E. London, 2 cs. 22
Arsenic—
Timaru, 10 c. £13
Barium Binoxide—
Venice, 10 t. 5 c. £375
Bleaching Powder—
Durban, 1 t. £9
Borax—
Rotterdam, 50 cks. £75
Cologne, 2 t. 12 c. 40
Calcium Chloride—
Durban, 5 t. £18
Carbonic Acid Gas—
Channel Is., 61 tubes £23
Caustic Soda—
Lyttelton, 6 t. 12 c. £50
Wellington, 5 36
Brisbane, 15 12 113
Canterbury, 13 17 99
Melbourne, 5 8
Antwerp, 4 14 103
Cape Town, 10 6
Auckland, 10 6
Townsville, 10 9
Chemicals *(otherwise undescribed)*
Stettin, 12 kgs. £60
Rotterdam, 13 cks. 5 270
Brisbane, 3 cs. 19
Hamburg, 35 pks. 1 brl. 43 607
Cologne, 11 c. 9 83
Genoa, 30 166
Rouen, 10 cks. 63
Bombay, 29 cs. 154
Madras, 37 48
Piræus, 1 brl. 23
Odessa, 5 28
Suez, 24 cs. 17
Dunkirk, 21 dms. 80
Calcutta, 5 22
Melbourne, 164 pks. 262
Karachi, 7 50 kldks. 86
Valparaiso, 2 39
Wellington, 4 35
Fremantle, 85 120
Demerara, 3 25 100 cbys. 53
E London, 20 41
Brussels, 5 kgs. 30
Cape Town, 16 31
Citric Acid—
Karachi, 2 cs. £12
Brussels, 10 c 56
Bombay, 1 7
Colombo, 1 7
Pt. Elizabeth, 3 20
St. Petersburg, 4 t. 18 595
Singapore, 2 12
Genoa, 10 60
Durban, 1 6
Brisbane, 2 11
Amsterdam, 14 80
Hiogo, 1 112
Copenhagen, 1 116
Antwerp, 2 10 280
Coal Products—
Alizarine
St. Petersburg, 4 cs. £201
Lyttelton, 10 cks. 1 kg. 163
Aniline
Dunedin, 1 ck. £10
Aniline Salts
Constantinople, 5 cks. £30
Benzine
Sydney, 10 cs. £7
Benzol
Treport, 50 cks. £138
Carbolic Acid
Rotterdam, 80 cks. £600
Ludwigshafen, 24 100
Philadelphia, 45 198
Riga, 25 133
Creosote
New York, 1,050 £755
Cresol
Philadelphia, 53 cks. £127
Naphtha
Treport, 28 brls. £95
Naphthaline
Rouen, 44 cks. 50 bgs. £77
New York, 88 76
Bordeaux, 51 30
Hamburg, 17 61
Paris, 100 64
Nitro Naphthaline
Hamburg, 7 cks. £55
Pitch
Hochfeld, 275 t. £376
New York, 230 116
Antwerp, 41 cks. 119
Baltimore 1,500 bgs. 330
Boston, 500 260
Pyridine
Hamburg, 5 dms. £142
Tar
Durban 360 dms. £41
Pt. Elizabeth, 200 7
Aden, 15 rnlts. 9
Tar Oil
Boston, 330 cks. £200
Toluol
Rotterdam, 95 rnlts. £450
Copper Sulphate—
Galatz, 1 t. £16
Malta, 3 6 c. 51
Suez, 1 2 17
Amsterdam, 4 18 83
Tampico, 16 16 254
Cream of Tartar—
Sydney, 3 t. 10 c. £90
Yokohama, 1 83
Newcastle, 3 11
Disinfectants—
Hobart, 106 pks. £63
Durban, 30 37
Penang, 5 cks. 24
Brisbane, 3 43 dms. 51
Cape Town, 175 118
Sydney, 108 5 cs. 53
Paris, 10 15
Glycerine—
Rotterdam, 3 t. £133
Manure—
Wellington, 127 t. 10 c. £475
Auckland, 176 14 650
Madras, 21 19 93
Madeira, 20 140
Durban, 10 4 70
Otago, 150 395
Salobrina, 517 3,6 9
Guadeloupe, 205 1,845
Barbadoes, 25 225
Trinidad, 302 2,700
Dominica, 10 2 90
Lyttelton, 350 4,660
Pearl Ash—
Lyttelton, 11 c. £14
Phosphorus—
Oporto, 6 cs. £58
Potash—
Brussels, 7 c. £57
Paris, 5 32
Potassium Chlorate—
Piræus, 1 t. £31
E. London 1 10 c. 39
Potassium Cyanide—
Delagoa Bay, 17 t. £1,67[illegible]
Townsville, 35 55 cs. 4,60[illegible]
Rockhampton, 1 5 c. 12[illegible]
Melbourne, 5 53[illegible]
Potassium Muriate—
Madras, 11 t. 9 c. £1[illegible]
Potassium Prussiate—
Japan, 1 t. £6[illegible]
Rouen, 1 6[illegible]
Genoa, 6 12 c. 35[illegible]
Pt. Elizabeth, 6 [illegible]
Saltpetre—
Sydney, 2 t. £45
Montreal, 12 17 c. 230
Melbourne, 1 20
Sheep Dip—
Cape Town, 200 dms. £36
Durban, 1 cs. 5
Lyttelton, 50 cks. 500 dms. 320
Montreal, 5 10
Soda—
Rotterdam, 5 t. 9 c. £30
Sodium Bicarbonate—
Christchurch, 10 t. 1 c. £66
Ghent, 2 5
Sodium Hyposulphite—
Adelaide, 32 t. 3 c. £140
Sodium Prussiate—
Boston, 10 t. £360
Sulphur—
Sydney, 80 bgs. £54
Cape Town, 19 t. 8 c. 182
E. London, 3 15 37
Pt. Elizabeth, 25 kgs. 11
Sulphuric Acid—
Penang, 30 cs. £22
E. London, 10 15
Superphosphate—
Bluff, 150 t. £450
Lyttelton, 600 1,609
Tartaric Acid—
Yokohama, 1 t. 5 c. £143
Lyttelton, 4 23
Melbourne, 2 26
Durban, 2 11

LIVERPOOL.

Week ending June 22nd.

Acetic Acid—
Lisbon, 14 c. 2 q. £8
Alkali—
Boston, 24 t. 1 c. £154
Lisbon, 29 19 120
Corfu, 9 7 1 q. 38
Wellington, 4 18 3 20
Canterbury, 5 3 20
Alum—
Sao Paulo, 1 t. £6
Odessa, 21 105
Galatz, 4 19 c. 2 q. 25
Kustendjie, 1 3 5
Smyrna, 4 6 2 24
Aluminous Cake—
Calcutta, 22 t. 2 c. £78
Melbourne, 5 19 18
Ammonia—
Colombo, 6 c. £22
Ammonium Carbonate—
Genoa, { 60 kgs. / 1 t. 18 c. £121
Venice, 2 3 55
Rangoon, 10 10
Ammonium Chloride—
Samsoun, 10 c. £16
Bombay, 4 t. 10 139
Lisbon, 4 3 q. 10
Alexandria, 4 7
Beyrout, 10 16
Ammonium Sulphate—
Valencia, 50 t. £475
Teneriffe, 19 3 c. 2 q. 170
Genoa, 10 2 2 86
Cartagena 39 15 3[illegible]
Gd. Canary, 2 20
Nantes, 12 16 116
Baltimore, 49 19 47[illegible]
Sourabaya, 676 6 6,099
Samarang, 114 4 3 1,010
Antimony Sulphide—
New York, 11 c. £25
Barytes—
Halifax, 15 t. 1 c. 2 q. £35
Basic Slag—
Nantes, 50 t. £75
Bleaching Powder—
Baltimore, 58 cks.
Bombay, 10 10 cs.
Boston, 383
Calcutta, 20
Christiania, 10
East St. Louis, 27
Genoa, 98
Hong Kong, 20
Libau, 22
Montreal, 40
Naples, 32
New York, 518 50 brls.
Oporto, 23
Pernambuco, { 2 / 1 t. 3 q. £6
Philadelphia, 217 cks.
Pt. Elizabeth, 3
Rio de Janeiro, 14 brls.
Seville, 20
Boracic Acid—
Sydney, 2 t. 15 c. 2 q. £60
Borax—
Montreal, 8 t. £10[illegible]
Santander, 12 c. 1 q. 1[illegible]
Callao, 1 10 2[illegible]
Antwerp, 4 10 7[illegible]
Shanghai, 1 8 2[illegible]
New York, 4 1[illegible]
St. Domingo, 15 1[illegible]
Vera Cruz, 1 6 1[illegible]
Calcium—
Adelaide, 5 t. 2 c. £11
Calcium Chloride—
Odessa, 9 t. 19 c. £27
Carbolic Acid—
Barcelona, 7 c. 2 q. £5
Oporto, 9 3 31
Hiogo, 2 t. 10 135
Genoa, 1 13 3 104
Baltimore, 4 17 3 370
Hamburg, 1 16 2 113
New York, 30 brls. 65
Caustic Potash—
San Francisco, 3 t. 12 c. £98
Milan, 13 20
Caustic Soda—
Antwerp, 65 dms.
Bahia, 30
Barbadoes, 85 pks.
Batavia, 40
Bilbao, 30
Bombay, 70
Boston, 50 brls.
Chicago, 50
Coquimbo, 10
Corfu, 30
Delagoa Bay, 20
Demerara, 106
Fiume, 15
Galatz, 30
Genoa, 35 35 kgs.
Hamburg, 40
Hiogo, 111
La Guayta, 40
Las Palmas, 5
Leghorn, 35
Malaga, 83
Melbourne, 94
Montreal, 170
Nantes, 30
New York, 200
Odessa, 56
Oporto, 20
Parangua, 50
Rio de Janeiro, 54
Rotterdam, 2
St. Stephen's, 52
Samarang, 14
San Francisco, 80
San Sebastian, 30
Santos, 20
Seville, 275
Shanghai, 30
Singapore, 10
Sourabaya, 16
Stockholm, 5
Sydney, 15
Talcahuano, 25
Valencia, 15
Valparaiso, 50
Venice, 35
Vera Cruz, 70
Yokohama, 100
Chemicals *(otherwise undescribed)*
Boston, 2 t. 12 c. £8[illegible]
Rotterdam, 2 13 3[illegible]
Natal, 1 1[illegible]
Kustendjie, 10 brls. 4[illegible]
Galatz, 10 4[illegible]
Cairo, 10 2[illegible]
Alexandria, 10 1[illegible]
Adelaide, 6 kgs. 6 cs. 2 [illegible]
Lisbon, 1 ck. [illegible]
Sydney, 100 7[illegible]
China Clay—
Baltimore, 250 cks.
Boston, 160
Calcutta, 140
Montreal, 298
Naples, 40
Newport News, 930
New York, 280
Sydney, 44
Citric Acid—
Piræus, 6 c. £34
Coal Products—
Aniline Oil
Genoa, 5 dms.
Philadelphia, 33
Aniline Salts
Bombay, 5 cs.
Boston, 79
Creosote Salts
Bordeaux, 100 brls.
Nantes, 20 t. £33
Naphthylamine
New York, 3 cks.
Pitch
Antwerp, 109 t. 6 c.
New York, 45 cks.
Vancouver, 50 brls.
Tar
Galatz, 90 brls.
Lagos, 10
Sulina, 10
Copper Sulphate—
Bourgas, 11 £15

Antwerp, 14 12 c. 239
Bordeaux, 190 18 2 q. 1,913
Amsterdam, 5 2 1 80
Constantinople, 3 49
Cette, 159 13 1 3,154
Penang, 1 10 24
Bangkok, 10 9
Batavia, 2 18 3 46
Nantes, 48 11 1 791
Ancona, 5 77
Talcahuano, 1 6 2 22
Genoa, 7 15 126
Ghent, 5 1 3 85
Charente, 4 1 1 81
Batoum, 50 2 1 831
New York, 15 17 248
Calcutta, 1 5 20
Danzig, 4 17 1 77

Cream of Tartar—
Delagoa Bay, 1 t. 2 c. £32

Disinfectants—
New York, 4 t. 13 c. 2 q. £60
Rangoon, 70 gls. 11 65
Montreal, 5 10
Kurrachee, 1 t. 2 3 11

Dyestuffs—
Aniline Colours
Boston, 1 cs.
Lisbon, 2 kgs.
New York, 48 pks.

Dyestuffs *(otherwise unnes.)*—
Genoa, 10 cks.
New York, 10
Oporto, 1 brl.
St. John's, Nfld., 1 cs.

Glue—
Rangoon, 80 t.
Kingston, 1 ck.
Shanghai, 50

Glycerine—
Rouen. 1 t. £52
Shanghai, 5 c. 15
Nantes. 10 12 424
Chicago, 14 8 3 q. 500

Magnesia—
Vera Cruz, 1 cs.

Magnesium Sulphate—
Rio de Janeiro, 200 kgs.

Manure—
Bordeaux, 7 t. 7 c. £30

Oxalic Acid—
Sao Paulo, 19 c. £31
Boston, 6 t. 10 179

Paint—
Alexandria, 317 kgs.
Antwerp, 60 dms.
Barbadoes, 9
Batavia, 16 cs.
Belize, 203 cks.
B. Ayres, 19
Calcutta, 400
Carlovassi, 4
Constantinople, 232
Demerara, 331 pks.
Dunedin, 7
Hong Kong, 40 35
Kerasunde, 4
Limon. 45
Maracaibo, 110
Mexico City, 23
N. Orleans, 45
Panama 412 59 1
Pt. Natal 40 dms. 1 cs.
St Domingo 5 cks.
St. John's. Nfld., 10
St. Thomas, 12
San Francisco, 50
Savanilla, 20 5
Sierra Leone, 66
Sourabaya, 12 cs
Tongku, 40
Trieste, 20
Trinidad, 1 ck.

Painter's Colours—
Bahia, 2 pks. 16 cs.
Calcutta, 6 cks.
Galata, 17
Hong Kong, 40 kgs.
Lagos, 5
Malta, 100
Manaos, 616
New York, 9 5 cs. 5
Oporto, 5 bxs
Para, 16 brls.
Patras, 5
Santos, 1 cs. 1 ck.
Sourabaya, 160 kgs.
Toronto, 12 2 brls.
Townsville, 240

Paraffin Wax—
Bari, 17 bgs.
Naples, 100
Venice, 15

Phosphates—
Tuticorin, 2 t. £5

Phosphorus—
Osaka, 10 c. £82
Santos, 2 22

Picric Acid—
N. Orleans, 8 t. 2 c. £790

Potash—
Rangoon, 1 cs. £5

Potash Salts—
N. Orleans, 24 t. 12 c. 2 q. £7244

Potassium Bichromate—
Oporto, 2 t. 17 c. 2 q. £96
Vera Cruz, 3 3 8

Potassium Carbonate—
Oporto, 1 cs. £18

Potassium Chlorate—
Bjorneborg, 9 c. £15
Copenhagen, 1 t. 30
Gothenburg, 2 10 79
Hiogo, 30 900
Naples, 1 30
Philadelphia, 20 10 620
Rotterdam, 5 15
Vera Cruz, 1 28

Potassium Cyanide—
Rio de Janeiro, 2 t. £220

Potassium Prussiate—
Genoa, 14 cks. £165

Salt—
Abonnema, 10 t.
Adelaide, 5
Akassa, 295 11 c.
Algoa Bay, 26 6
Aligator Pond, 10 14
Anamaboe, 10 10
Antwerp, 70
Baltimore, 370
Barbadoes, 70 7
Belize, 154 9
Boston, 1,610
B. Ayres, 108 4 90 cs.
Calcutta, 100
Cameroons, 40
C. C. Castle, 12 9
Chicago, 200
Conakry, 20
Copenhagen, 521
Dunedin, 85
E. London, 28
Ghent, 155
Gothenburg 10
Gd. Labou, 11 3
Iquitos, 15
Jersey, 120
Kingston, 20
Lagos, 98
Montreal, 1,709
Newcastle, 150
N. Orleans, 130
New York, 2,150 sks.
Pt. Elizabeth, 60
Rio de Janeiro, 50 cs.
Rotterdam, 200
St. John's, N'd., 750
Salt Pond, 651 bgs.
Santos, 20
Sydney, 165 t 5
Trinidad, 2,000 bgs. 1,200 sks.
Wellington 8,160 pckts. 1,328

Salt Cake—
Genoa, 5 t. 8 c. £10
New York, 6 1 91

Saltpetre—
Pernambuco, 8 c. 3 q. £10
Syra, 2 t. 1 1 41

Sheep Dip—
B. Ayres, 700 dms. £472
Buenaventura, 1 t. 48

Soap—
Alexandretta, 12 cs.
Alexandria, 97 bxs.
Algoa Bay, 3,687 10
Amiens, 50
Anamaboe, 59
Antwerp, 520
Auckland, 550
Bangkok, 151
Barbadoes, 430
Batavia, 1,000
Belize, 590
Beira, 100
Bluefields, 100
Bombay, 1,501
Bonny, 400
Brass, 100
Brussels, 1,960
B. Ayres, 1
Buenaventura, 4
Calcutta, 56 280 pks.
Camercons, 205
Canaria, 658
Cape Mount 25
Cape Town, 2,515
Caracas, 1
Christchurch, 430
Constantinople, 2
Delagoa Bay. 3,457 60
Demerara, 320 3,087
Dominica, 20
Dunedin, 750
Durban, 515
E. London, 1,700
Ghent, 100
Gibraltar, 120
Grenada, 95
Grey Town, 600
Hong Kong, 100
Iquitos, 400
Jersey, 206 71
Johannesburg, 50 140
Karachi, 25
Kingston, 5
Lagos, 279
Las Palmas, 244
Lisbon, 2 kgs.
Madras, 20 bxs.
Malta, 40
Melilla, 50
Menado, 56
Montreal, 5
Naples, 225
New Chatel, 110
New York. 79 2 cks.
Old Calabar, 1,564
Penang, 50
Pt. Antonio, 20
Pt Elizabeth, 1,300 50
Pt. Natal, 251 208 3 pks.
Pretoria, 50
Rangoon, 5
Rotterdam, 200
St. Gall, 245
Salt Pond, 150
Sierra Leone, 260
Singapore, 3,014
Smyrna, 1
Sydney, 2,000
Tanga, 96
Toronto, 1,000
Truxillo, 100 bdls.
Valparaiso, 1
Vancouver, 24
Wellington, 760 1 tnk.
Zanzibar, 150
Yokohama, 2

Soda—
Calcutta, 20 brls.
Constantinople, 150
Delagoa Bay, 50 kgs.
Montreal, 50

Soda Ash—
Abo, 21 cks.
Adelaide, 68
Bahia, 20
Baltimore, 37
Bombay, 4
Boston, 801 pks. 1,103
Calcutta, 107
Copenhagen, 900 bgs.
Genoa, 300
Hamburg, 1,500 13
Hiogo, 250 kgs
Leghorn, 18 brls.
Libau, 3
Lisbon, 11
Melbourne, 67 bgs.
Mitylene, 40
New York, 2,000 75
Oporto, 16
Riga, 15
Rio de Janeiro 25 100
Rotterdam, 121 19
Samarang, 24
Seville, 20
Smyrna, 6
Sourabaya, 28
Sydney, 37
Trieste, 102
Venice, 81

Soda Crystals—
Barcelona, 31 bgs.
Boston, 280 brls.
New York, 250 kgs.
Pt. Natal, 60
Sandy Point, 50
Singapore, 14
Valparaiso, 200

Sodium Biarseniate—
Santos, 4 cks.

Sodium Bicarbonate—
Algoa Bay, 30 cs.
Ancona 75 pks.
Antwerp, 155
Bayonne, 12 cks.
Bombay, 135 kgs.
Braila, 40
Brisbane, 180
Calcutta, 198 pks.
Constantinople, 30
Delagoa Bay, 10 bgs.
Demerara, 20 kgs.
Helsingfors, 80
Hiogo, 840
Leghorn, 124
Libau, 85
Madras, 25
Melbourne, 50 bgs.
Mombassa, 30 kgs.
Montreal, 210
Nantes, 30
Oporto, 1 ck.
Panama, 2
Patras, 30
Point-a-Pitre, 4
Pt. Natal, 20
Rio de Janeiro, 3
Rotterdam, 25
St. John's, N'fld., 50
Seville, 25 brls.
Singapore, 4
Smyrna, 20
Stamboul, 20
Trinidad, 100
Tunis, 20

Sodium Bichromate—
Vera Cruz, 1 ck.

Sodium Carbonate—
Genoa, 50 kgs.

Sodium Chlorate—
Montreal, 100 kgs.
Santos, 5

Sodium Hyposulphite—
Naples, 5 cks.

Sodium Silicate—
Bombay, 5 brls.
Kingston, 8

Starch—
Pernambuco, 5 bgs.

Sulphur—
Montreal, 1,010 t. 5 c. £4,800
New York, 2 2 5
Para, 1 10 15
Rangoon, 3 kgs. 6

Sulphuric Acid—
Rio de Janeiro, 6 t. 10 c. £42

Superphosphates—
Nantes, 19 t. 10 c. 2 q. £29

Tartaric Acid—
Vancouver, 2 c. £9

Varnish—
Bilbao, 2 cks.
Demerara, 5 dms.
Genoa, 6 2 cs.
Leghorn, 3
Nantes, 7
Naples, 7
New York, 1
Odessa, 7
Seville. 1
Shanghai, 1 12

White Lead—
Alexandretta, 20 kgs.
Bahia, 8 t.
B. Ayres, 15 cks.
Shanghai, 160 kgs. 4 cs.
Tongku, 4

Wolfram Ore—
Hamburg, 17 t.

Zinc Chloride—
Bombay, 3 t. 1 c. 1 q. £42
Shanghai, 1 14

MANCHESTER.

Week ending June 22nd.

Alum—
Bombay, 69 brls.
Germany, 22 cks.

Ammonium Chloride—
Beyrout, 5 cks.

Aniline Colours—
Germany, 13 kgs. 2 cs.

Aniline Oil—
Germany, 13 dms.

Calcium Carbonate—
Jaffa, 5 cks.

Caustic Soda—
Alexandria, 50 dms.
Tunis, 10

Chemicals *(otherwise undescribed)*
Alexandria, 50 brls.
Beyrout, 25
Germany, 2 cks.

Colours—
Germany, 4 cks

Disinfectants—
Bombay, 50 cks.
Dyestuffs—
Extracts
Holland, 1 ck.
Glauber Salts—
Bombay, 100 bgs.
Glucose—
Alexandria, 1 ck.
Glue—
Germany, 5 cks.
Glycerine—
Germany, 5 crbys
Iron Oxide—
B. Ayres, 639 cks.
Linseed Oil—
Alexandria, 1 brl.
Jaffa, 4
Paint—
B. Ayres, 2 cks.
Jaffa, 4
Painters' Colours—
B. Ayres, 12 pks.
Jaffa, 3 cks, 6 brls.
Paraffin Wax—
Alexandria, 3 cs.
Bombay, 5
Jaffa, 8
Pitch—
La Rochelle, 540 t.
Pumice Stone—
Bombay, 1 cs.
Soap—
Tripoli, B., 1 cs.
Soda Crystals—
Alexandria, 150 brls.
Jaffa, 10
Sulphur—
Muscat, 35 brls.
Tallow—
Bombay, 115 brls.
Holland, 2 cks.
Tar—
Germany, 25 dms.
Turpentine—
Alexandria, 15 dms.
Varnish—
Bombay, 1 cs.
Zinc Chloride—
Bombay, 5 cks.

GLASGOW.

Week ending June 23rd.

Ammonium Carbonate—
Christiania, £28
Ammonium Sulphate—
Demerara, 63 t. 10 c.
Rotterdam, 60 14
Boracic Acid—
Rotterdam, £14
Borax—
Rotterdam, £115
Castor Oil—
Santos, £115
Caustic Soda—
Archangel, 4 t. 3 c.
Transvaal, 1 1¼
Coal Products
Aniline
Calcutta, £44
Creosote Oil
Danzig, 21 t.
Christiania, £12 10 cs.
Pitch
Bombay, £116
Canada, 65
Danzig, 98 t. 8 c.
Gothenburg, 440
Hamburg, 10
Kolding 1
Tar
Amsterdam, £33
Bombay, 36
Boston, 75
Calcutta 25
Christiania, 35
Danzig, 147 t. 6 c.
Karachi, 58
Hamburg, 2 17
Riga, 175
Tar and Pitch
Trieste, £141
Coal Tar Products (*otherwise undescribed*)—
Rotterdam, £100
Copperas—
Bombay, £86
Extracts—
Antwerp, £38
Calcutta, 95
Farina—
Amsterdam, £150 17s.
Gelatine—
Canada, £72
Iodine—
Rotterdam, £795
Lead Acetate—
Bombay, £91
Lead Sulphate—
Stockholm, £70
Linseed Oil—
Canada, 5 t. 3 c.
Singapore, 13¾
Mica—
U.S.A., 2 c.
Muriatic Acid—
Calcutta, £55
Paint—
Hong Kong, £30
Nagasaki, 20
Natal, 348
Singapore, 152
Painters' Colours—
Calcutta, £423
Newcastle, 206
Pt. Elizabeth, 27
Pt. Said, 40
Rotterdam, 5
Paraffin Wax—
Bombay, £56
Danzig, 13 t. 1 c.
Fiume, 745
Rotterdam, 50
Singapore, 56
Stockholm, 70
Trieste, £339 10s.
Venice, £44
Potassium Bichromate—
Amsterdam, 5 t. 5 c.
Bombay, £167 16s.
Boston, £426
Calcutta, 187
Rotterdam, 40
U.S.A., 334
Venice, 371
Potassium Cyanide—
Singapore, £101
Potassium Prussiate—
New York, £247
Soap—
Bombay, 2 t. 12¾ c.
E. London, 2 10
Singapore, 6 5
Sodium Bichromate—
Bombay, 1 t. 14¼ c.
Starch—
Rotterdam, £3
Sulphuric Acid—
Calcutta, £25
Varnish—
Tokio, £30 12s.
White Lead—
Shanghai, £29

HULL.

Week ending June 18th.

Alkali—
Riga, 70 dms.
Stockholm, 1 cs.
Wyburg, 13 cks.
Ammonium Sulphate—
Dunkirk, 172 bgs.
Palermo, 46
Stettin, 850
Bleaching Powder—
Stettin, 18 cks.
Carbolic Acid—
Amsterdam, 24 brls.
Chemicals (*otherwise undescribed*)
Abo, 1 ck.
Amsterdam, 172
Antwerp, 4 1 cs.
Bombay, 550
Christiania, 19 728 slbs.
Copenhagen, 4
Fiume, 4
Gothenburg, 4 pks.
Hamburg, 12 brls. 320 cs. 15
Helsingfors, 9
Riga, 131 bgs. 100 cks.
Rotterdam, 103
Rouen, 40
Stettin, 4
Venice, 20
Wasa, 15
Cottonseed Oil—
Amsterdam, 1,560 c.
Antwerp, 454
Bremen, 101
Christiania, 13
Gothenburg, 104
Hamburg, 1,376
Rotterdam, 1,066
Rouen, 85
Stettin, 33
Dyestuffs (*otherwise undescribed*)
Fiume, 10 brls.
Raumo, 50
Farina—
Christiania, 35 sks.
Glue—
Copenhagen. 10 bgs.
Linseed Oil—
Amsterdam, 100 c.
Antwerp, 18
Bombay, 579
Bordeaux, 35
Christiania, 363
Christiansund, 28
Copenhagen, 35
Drontheim, 90
Hamburg, 155
Kurrachee, 24
Rotterdam, 37
Rouen, 5
Stavanger, 43
Venice, 57
Manure—
Dunkirk, 2,483 bgs.
Rotterdam, 1 ck. 1 cs.
Naphtha—
Copenhagen, 10 cks.
Paint—
Bergen, 1 ck.
Christiania, 2
Helsingfors, 2 cs.
Painters' Colours—
Abo, 140 cks.
Amsterdam, 30
Antwerp, 105 1 brl. 3 cs. 9 dms.
Bombay, 562 71 40
Bremen, 6
Bari, 10
Christiania, 2
Copenhagen, 13 6 pks. 33 dms.
Dunkirk, 1
Fiume, 5
Ghent, 12
Gothenburg, 2 50
Hamburg, 1
Helsingfors, 15
Jersey, 30 pks.
Kurrachee, 146 6
Konigsberg, 6
Messina, 4
Norrkoping, 5
New York, 20 c.
Rotterdam, 6 9 dms.
Rouen, 23 28 pks.
St. Petersburg, 205
Stockholm, 1 cs.
Uleaborg, 7
Phosphate—
Riga, 3,119 bgs.
Pitch—
Abo, 65 cks
Antwerp, 290 t.
Helsingfors, 90 cks.
Slag Meal—
Stolpemunde, 461 t.
Soap—
Amsterdam, 11 cs.
Christiania, 7
Drontheim, 235 5 bls.
Helsingfors, 1
Tallow—
Amsterdam, 6 cks.
Hamburg, 170 brls.
Helsingfors, 42
Tar—
Abo, 100 brls.
Amsterdam, 6 cks.
Antwerp, 1
Bremen, 43
Christiania, 11
Copenhagen, 6
Drontheim, 5
Hamburg, 25
Helsingfors, 258
Rotterdam, 10
Wyburg, 50
Turpentine—
Gothenburg, 5 brls.
Varnish—
Antwerp, 1 brl.
Bombay, 75 dms
Christiania, 1 cs.
Hamburg, 5 cks.
Rotterdam, 3
Stettin, 4

TYNE.

Week ending June 18th.

Alkali—
Copenhagen, 31 t. 5 c.
Rotterdam, 4
Antimony—
Genoa, 4 t.
Hamburg, 7 10 c.
Rotterdam. 5
Bleaching Powder—
Antwerp, 18 t. 7 c.
Copenhagen, 4 19
Rotterdam, 24 8
Trieste, 14 19
Bones—
Hamburg, 7 t. 18 c.
Caustic Soda—
Antwerp, 4 t. 18 c.
Copenhagen, 4 7
Hamburg, 51 11
Copperas—
Tromsoe, 3 c.
Magnesia—
Hamburg, 1 c.
Paint—
Antwerp, 1 t.
Rotterdam, 1
Slag Wool—
Bergen, 14 c.
Stavanger, 3
Soda—
Drontheim, 29 t. 18 c.
Trieste, 9 13
Tromsoe, 2
Soda Ash—
Hamburg. 10 t. 4 c.
Sodium Hyposulphite—
Hamburg, 20 t. 1
Tallow—
Rotterdam, 5 t. 1
Turpentine—
Tromsoe, 7 c.
Varnish—
Tromsoe, 14 c.
White Lead—
Copenhagen, 17 c.
Zinc Ashes—
Antwerp, 1 t. 19 c.

GOOLE.

Week ending June 15th.

Chemicals (*otherwise undescribed*)
Amsterdam, 20 cks.
Coal Products (*otherwise undes.*)—
Antwerp, 1 cs.
Boulogne, 25 cks. 3 pks.
Ghent, 2
Rotterdam, 87 1
Dyestuffs (*otherwise undescribed*)
Hamburg, 50 cks.
Manure—
Rotterdam, 200 bgs.
Painters' Colours—
Rotterdam, 1 ck. 1 cs.
Pitch—
Antwerp, 484 t.

GRIMSBY.

Week ending June 18th.

Caoutchouc—
Malmo, 1 ble.
Chemicals (*otherwise undescribed*)
Dieppe, 6 cs.
Malmo, 1 ck. 4
Coal Products (*otherwise undes.*)—
Dieppe, 100 cks. 2 cs.
Hamburg, 1 1
Painters' Colours—
Antwerp, 2 cks.
Dieppe, 2 1 kg.
Hamburg, 1 ck.
Sulphur—
Malmo, 395 bgs.

PRICES CURRENT.

WEDNESDAY, JUNE 29TH, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	6/-	&	8/6
,, Glacial .. .. ,,		37	6
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3¼
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	0	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	4
,, ·880=28° B .. .. ,,	0	0	2¾
,, =24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	9	6	3
,, ,, (grey) Hull .. .. ,,	9	6	3
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	5
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	5
Benzol, 90's .. .. per gallon	0	0	10
,, 50/90 ,, ... ,,	0	0	10½
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. .. per lb.	0	0	7
,, (liquid 95/97%) .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. ,,	0	0	5½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	0	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	49	17	6
,, Sulphate .. .. ,,	15	17	6
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	10	0
,, Litharge Flake (ex ship) .. .. ,,	17	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, *Nitrate*	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	5	0
,, ,, (grey) (ex ship .. .. ,,	7	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	8	0	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	15	0
,, Borate .. .. per cwt.	2	5	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	4	0
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	5	0
Stearine .. .. per ton	24	10	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett per lb.	0	0	3¾
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	15	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Cyanide, 98% .. .. ,,	0	1	3
,, Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
,, ,, (Caustic Potash) 75/80 % .. ,,	19	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6¼
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3⅛
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	0	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3⅝
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	3
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton (12 ton lots)	8	5	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	15	0
,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	10	0
,, Phosphate .. .. ,,	9	10	0
,, Prussiate .. .. per lb.	0	0	5¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6¼
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	13	9
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	22	10	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	72	10	0
Zinc (Spelter) .. .. ,,	02	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

CHEMICAL TRADE JOURNAL

AND

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Readers are invited to forward items of intelligence, or cuttings from local newspapers, of interest to the trades concerned.

Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

BEET-ROOT CULTIVATION.

AFTER many years of patient work upon trials of sugar beet cultivation in Great Britain, by Dr. G. Shack-Sommer, S. Stein, and others, the Royal Agricultural Society has deigned to pay a little attention to this question, apart from their Rothamsted experiments in 1871-5.

It is something to be able to say as much as this, even if the Society has addressed itself to the task of investigation in a more or less half-hearted fashion.

There is no doubt that in Messrs. Lawes and Gilbert we have two able investigators whose experience is ripe, even if their pessimistic proclivities are at times redundant.

Seeing that we already have several enthusiastic advocates of sugar beet cultivation in the North, and also other gentlemen in Warwickshire who are sufficiently impressed with the possibilities of this branch of agriculture to foster it with prizes, it is perhaps as well that Messrs. Lawes and Gilbert should adopt the dispassionate, nay almost depressing tone which characterises their special article on this subject, which appears in the last quarterly issue of the Journal of the R. A. S.

They lay great stress on the fact that the average summer temperature in the South and East of England is below 70°F., it being asserted that the mean of 70°F. is "desirable to ensure success." This assertion, apparently, is based mainly on the statement of Dr. Wiley, of the Department of Agriculture, Washington, U.S.A., but the actual words (which are cited by the authors) hardly seem to justify the interpretation put upon them.

Dr. Wiley says, "as far as temperature alone is concerned the sugar-beet attains its greatest perfection in a zone through the centre of which passes the isothermal line of 70°F. for the months of June, July, and August."

This hardly necessitates 70° F. being desirable to *ensure* success. Grapes attain their greatest perfection abroad, but they are grown at a profit, even by artificial means, in this country.

A little farther on it is pointed out that if considerable areas, in districts with suitable climatic conditions, were devoted to sugar beet growing, there would be a greatly increased employment for the population. This probability causes the authors to at once develop fears as to the local supplies of labour being equal to the demand in the autumn, and leads them to apprehend a rise in wages.

This apprehension is hardly justifiable we think, as any sudden local demand for labour would only tend to relieve the congested labour markets in the neighbouring districts; and wages would scarcely rise without an absolute dearth of labourers. At all events, if a temporary demand for labour in the "comparatively limited areas" in which sugar beets can—according to the authors—alone be grown, the depression in the agricultural labour market, of which we hear so much and so often, must be grossly exaggerated.

These are only two of the instances in which the authors show their tendency to be swayed by pre-conceived objections. If advocates in the past have played the part of "bulls" the authors have certainly assumed the *rôle* of "bears."

Between the two, those who are seriously disposed to test the possibilities of sugar beet cultivation, will now be able to strike the happy medium and judge for themselves.

Individually, as long as beet cultivation is not paraded as a panacea for agricultural depression, our sympathies and beliefs are with Col. Millward and his associates, who should have the full support of all those to whom the chemical and and industrial prospects of the question appeals. We shall be pleased to place our columns in the future, as in the past, at the disposal of those who have helpful criticism as well as helpful information to impart.

THE TREATMENT OF BROKEN HILL SULPHIDE ORES.

A PAPER on the above subject was read before the Institution of Mining and Metallurgy on the 22nd of June last by Mr. Edgar A. Ashcroft, whose connection with the process, worked experimentally at Grays in this country, and later, on the large scale at Cockle Creek, must entitle his remarks to special attention. The process in question may roughly be outlined as follows. The ore is first dried and then ground to a coarse power, after which it is roasted at as low a temperature as possible, in order to effect the retention of a maximum of sulphur as sulphate. The roasting is preferably followed by another grinding and then by leaching with dilute sulphuric acid, the lead and silver being left in the residue while the zinc passes into solution as sulphate. The two former are recovered by smelting, and the latter either by evaporating the solution and roasting to oxide or by an electrolytic process. We gather that from a variety of causes the working of the process has so far not been an unqualified success, but this is by no means a unique experience with new and complicated processes, and we shall await further developments with interest.

TRIPOLI ESPARTO.

THE year 1868 saw the first exportation of this article from Tripoli. It grows wild all along the coast from a little west of Tripoli to Khoms and Zleiten to the east, and inland to a distance of from two to five days' camel march. It all comes to England for paper-making purposes. That near the coast has long been eradicated by over-plucking in the early days when the fibre fetched £12. per ton in the English market, now reduced to £3. In 1880 hand-presses gave way to hydraulic presses, causing a saving in bulk and freight of 50 per cent. During the last 10 years the average yearly export has been 46.019 tons. of the value of £128,320. Last year (1897), 37,200 tons, valued at £74,400., were exported, showing the decreasing value of the article, consequent on the large use of wood-pulp in the manufacture of paper.

The fibre attains maturity after three years' growth, under which age itis useless to the paper-maker through lack of the necessary strength. No discrimination is exercised by the Arab between mature and immature fibre, and as it appears incapable of natural reproduction it has entirely disappeared from these districts near the sea where it formerly grew abundantly, necessitating its being sought for further afield among the hills and watercourses, two to five day's journey from the coast.

This latter circumstance, coupled with the natural laziness of the Arab in seeking to increase the weight of his load with the least possible toil to himself by plucking weighty and mature fibre, may probably delay the total extinction of the plant for some years to come. In the Algerian provinces, notably Oran, large plains formerly densely covered with the fibre are now entirely denuded, and not a plant left, owing to the ignorance and thoughtlessness of the labourers.

Despite the very little remuneration now offered by present prices to the peasantry, coupled with the long distance whence it has now to be brought to a seaport, quantities have little diminished, showing the pecuniary assistance it affords to the peasantry when the cerial crops fail through insufficient rainfall.

Personal.—Mr. A. Trobridge, late with Messrs. Chance and Hunt, Ltd., Oldbury, has been appointed manager at the works of Messrs. John Riley & Sons, Hapton, Accrington.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

THE POLISH CHEMICAL TRADE.

(To the Editor of the Chemical Trade Journal.)

Sir,—In No. 580 of your esteemed paper, there is a report entitled "The Chemical Trade of Poland," in which the writer says, among other things, that the works already existing cannot meet the demand for sulphuric acid. As we are ourselves connected with the manufacture of sulphuric acid in Poland, and in consequence, thoroughly conversant with the state of things; we can assure you that, as far as the report refers to sulphuric acid, it is quite erroneous. Exactly the contrary is the case. The competition of the Polish sulphuric acid plants has become so keen in consequence of the opening of a new plant in the past year, that the now existing works have been compelled to diminish their production, and it is out of the question that the said works are in a position to supply for a very long time much more sulphuric acid than will be needed by the industry consuming the latter. Such being in reality the case, we should be obliged to you for rectifying the error contained in the above report.

Then there is another point which rivetted our attention. The report says that the cost of the pure sulphur extracted from the Czarkowsky ores is 85 copecks per poud, and means that this is a cheap price. This is another mistake, for on the face of this figure the Czarkowsky ores could not possibly compete with foreign ores or with sulphur imported from Sicily.—Yours etc.,

Verein fur Chemishe Industrie,

Frankfurt, July 5th, 1898.

CYANIDE IN AUSTRALIA.

LITIGATION with regard to the cyanide patents still appears to be proceeding in Victoria. The position of the patentees varies a good deal in the different colonies. In Australia the rights of the original patentees are held by the Australian Gold Recovery Company and in New Zealand by the Cassel Gold Extracting Co., and as, on appeal, it had been held by the English courts that while the general claim to patent cyanide solutions was bad the specific claim to patent a dilute solution was good, these companies sought to strengthen themselves by applying for leave to amend their specifications.

In West Australia, Queensland, and South Australia, leave was granted without opposition. In New Zealand leave was refused by the Registrar of Patents; but his decision was reversed on appeal to the courts. The Government then seems to have considered it advisable to acquire the patents, and did so for the sum of £15,000., a Bill having since been introduced imposing rates on the use of cyanide to reimburse the Treasury. In New South Wales the matter, we believe, is still *sub judice*, and that is pretty much the position in Victoria also.

There is now an agitation in progress in West Australia to force the Government to contest the rights of the company. The subject is an important one, and when the enormous influence which the cyanide patents have had upon gold production on the Rand is remembered, it would seem that the New Zealand Government has completed a bargain with the company which might be advantageously paralleled in the other Australasian colonies if the patentees showed any disposition to deal. The patent has already conferred great benefit upon the mining industry. It has contributed enormously to the general gold yield, and has realised an immense amount of wealth which would otherwise have been totally lost. Under these circumstances it is hardly likely that the patentees will feel disposed to come to terms unless they are generously dealt with.

Nitrate Statistics.—The Permanent Nitrate Committee's public statistical circular for July states: "Nitrate of soda—Total exports to Europe, June, 1,151,000 quintals; loading for Europe, July 1, 672,000 quintals; imports, Europe, June, 56,700 tons; deliveries, Europe, June, 53,200 tons; visible supply, Europe, July 1—stocks and afloat, 222.300 tons.

Pyro-Acetone Developer.—Messrs. Fuerst Bros., 17, Philpot-lane, London. advise us that in view of the success obtained by this developer, they are prepared to supply the acetone in concentrated solution in 1lb. bottles at 2s 3d. each, less usual discount to dealers. The quantity of acetone solution to be used is variable according to the developer, and they give two formulæ, which they advise for pyrogallic and hydroquinone:—*Pyro Formula:* Acid pyrogallic, 1 part; water, 100 parts; sulphite of sodium, anhyd., 5 parts; acetone solution (Lumiere's), 10 parts. *Hydroquinone Formula:* Hydroquinone, 3 parts; water, 100 parts; sulphite of sodium, anhyd, 10 parts; acetone solution (Lumiere's), 10 parts.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Artificial Camphor. J. E. T. Woods. 13,688. June 20.
Silicated and Asbestosised Pulp for Paper, &c. T. H. Cobley. 13,689. June 20.
Sewage Filters. R. O. Wynne-Roberts. 13,697. June 20.
Pressplates for Oil Presses. R. Middleton. 13,766. June 21.
Electro-deposition of Copper, &c. W. E. Heys. 13,861. June 22.
Production of Alcohol. W. H. Akester. 13,862. June 22.
Purifying Caucasian Petroleum. L. von J. Jarocki and T. Kiczerowiski. 13,881. June 22.
Explosives. G. Trench. 13,883. June 22.
Apparatus for Distilling Petroleum, &c. A. Adiassewich. 13,896. June 22
Smoke-Consumer. W. G. Stones. 13,914. June 23.
Drying China Clay. R. Hoyle. 13,927. June 23.
Portland Cement. W. L. H. Roberts. 13,954. June 23.
Enamel Paint. H. H. Bigland and J. Cunningham. 13,994. June 24.
Bleaching Compounds. The Aluminium Co., Ltd., and A. G. Haddock. 14,030. June 24.
Gas Scrubbers. G. Zschacke. 14,037. June 24.
Fluoro Compounds. W. Schmeisser. 14,033. June 24.
Carbonising Peat. W. T. MacGarry. 14,119. June 25.
Preventing Back Draught in Pyrites Furnaces. C. D. Abel. 14,131. June 25.
Electric Carbide Furnaces. W. L. Durban and J. Gore. 14,132. June 25.
Obtaining Metals, &c., from Ores. S. O. Cowper-Coles. 14,137. June 25.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Connection with the Purification of Sewage and Polluted Water. F. P. Candy, Ivy Bank, Ashley-road, Bawdon. Eng. Pat., 12,984. May 27th, 1897.

There are five figures illustrating various mechanical arrangements for automatically feeding and shutting off the supply of sewage to filters, so as to ensure the proper aeration of the filter beds. The necessary power is derived from the flow of sewage itself. Four different methods are described.

Improvements in the Manufacture of Hydrogen Peroxide, and in Apparatus therefor. S. Rosenblum and S. Rideal, both of 28, Victoria-st., Westminster, and the Commercial Ozone Syndicate, Ltd. 31, Lombard-street, London, E.C. Eng. Pat., 12,274 May 18th, 1897.

Ozone in the presence of water is caused to act on unsaturated organic compounds, such as aldehydes, the camphor, and terpene series. For commercial purposes an emulsion of spirits of turpentine and water is sprayed or vaporised by jets of ozone. The emulsion is kept in constant agitation by two sets of blades revolved in opposite directions by a simple mechanical device. The construction of the sprayer is simple and effective. The ozone, supplied at a pressure of about 7 lbs. to the square inch, enters the emulsion chamber, forces the emulsion to the sprayer, where it is further atomised by ozone jets. There are five figures.

Improvements in and Apparatus for the Manufacture or Production of Carbonic Acid Gas. H. Steinem, 9, Thistlewaite-road, Clapton, and K. S. Murray, 10, Chelsea Gardens, London. Eng. Pat., 13,825. June 4th, 1897.

Ordinary flue gases are aspirated through two scrubbers packed with marble chippings, one of which is fed with hot water, and one with cold. The gases then pass through towers packed with coke, down which warm potassium carbonate lye flows. The lye is drawn from a tank divided into two compartments, into one of which warm de-carbonated lye flows from the boilers, while into the other the bicarbonated lye flows from the towers. This lye is pumped to the boilers, which are of the Cornish type, passing on its way through a heater to be heated by the weak de-carbonated lye from the boilers. The carbon dioxide given off from the lye in the boilers is cooled, any condensed products separated, and passed to a gas holder. There are two figures.

Improved Method and Apparatus for Producing Calcium Carbide. W. P. Thompson, 322, High Holborn, W.C. (communicated by C. L. Wilson, C. Muma, J. W. Unger, H. Schneckloth, A. P. Brosius, and J. C. Kuchel, all of Holstein, Iowa, U.S.A.). Eng. Pat., 7,574. March 29th, 1898.

The lime and carbonaceous matter is pressed into cylinders or sticks and introduced into an electric arc. The inside of the furnace is first lined with granular calcium carbide, on to which the molten carbide falls, to be removed through an outlet provided for this purpose. There are 8 figures.

Improvements in Electric Furnaces for Manufacturing Calcium Carbide. W. P. Thompson, 322, High Holborn, W.C. (communicated by C. L. Wilson, C. Muma, J. W. Unger, H. Schneckloth, A. P. Brosius, and J. C. Kuchel, all of Holstein, Iowa, U.S.A.). Eng. Pat., 7,575. March 29th, 1898.

This invention relates primarily to the construction of a hollow electrode having at its upper end an insulator, which is provided with openings to communicate with the openings of the electrode. The whole can be raised or lowered so as to regulate the arc between the electrode and that in the base of the furnace. The operator can feed sticks of lime and carbon down the openings in the upper electrode into the arc. There are four figures.

Improvements in the Manufacture of Waterproof Material, more particularly intended for Roofing and Insulating Purposes. L. Hatschek, Vöcklabruck, Austria. Eng. Pat., 7,678. March 30th, 1898.

Very finely ground asphalte is mixed in a beater with the fibrous material to be impregnated, much in the same way as preparing pulp in paper-making. The mass is then formed into sheets, as in the ordinary manufacture of felt. The sheets are calendered, the asphalte melting and being thoroughly incorporated with the felt. When only a small proportion of asphalte to felt is used, the calendering temperature may have to be so high as to injure ordinary felt, in which case asbestos fibre is substituted.

Improvements in the Production of Artificial Indiarubber and Gutta-percha-like Substances. F. Fenton, 345, City-road, London, E.C. Eng. Pat., 15,269. June 26th, 1897.

This is a modification of Patent 26,548/96 for producing rubber substitutes, in which acetate or oxide of lead, zinc oxide, saltpetre, gum copal, and dilute nitric acid, either alone or in conjunction, are added to the magma of caoutchouc-like material, the resulting product being suitable for vulcanisation without the addition of natural rubber.

WOOD WOOL IN LIQUIDATION.

A WINDING-UP order having been made against the Abbey Wood Wool Manufacturing Co., Ltd., the statutory meetings of creditors and shareholders were held recently at the Carey-street offices of the Board of Trade, before Mr. Winearls, Assistant Official Receiver.

The Chairman reported that the company was registered in April, 1895, and was formed to carry on the business of manufacturers of wood, wool, and the cutting of hard woods into blocks. The nominal capital was £2,000, and it appeared that 280 shares of £1. each had been issued for cash. Under an agreement between Mr. Beattie and the company the latter acquired the goodwill, stock in-trade, etc., of a business carried on by the former at the Lukach Wharf, Cubitt-town. The purchase-price was £2,000., payable as to £1,000. in cash and the balance in fully-paid shares. It seems that Mr. Beattie acquired the concern in November, 1894, for £250., but no business was carried on by that gentleman. The shares were duly allotted, but the cash portion of the purchase money was not paid, and the vendor now claimed in respect of the same to have a lien on the lease of the wharf. It was stated that the company traded at a loss throughout. In March, 1896, a lease of the Jarradale Wharf was also acquired, and since December of that year the company appeared to have confined its business to the purchase of Jarrah wood and the manufacture of wood-blocks for street paving purposes. The company never had any working capital beyond borrowed money, and debentures appeared to have been issued covering the whole of the assets. In January last a meeting of shareholders was held, and resolutions were passed for voluntary liquidation, Mr. Byron Davies, a director and the secretary, being appointed liquidator. The debenture-holder commenced an action to enforce his security, and under these proceedings the Official Receiver was appointed receiver and manager. Accounts had been submitted showing unsecured liabilities £2,606, and the assets were valued at £750. After deducting the claim of the debenture-holder (£503) and preferential debts, a sum of about £150 remained for division amongst the unsecured creditors. As regards shareholders, the deficiency was returned at £3,816.

The proceedings resulted in the appointment of the Official Receiver as liquidator, with a committee of inspection.

THE "RAPLIN" HAND ICE MACHINE.

THE Pulsometer Engineering Co., Ltd., of Nine Elms Iron Works, London, S.W., have just introduced a new hand Ice Machine, "The Raplin." It is the result of many years' experience in this class of machine, and in it will be found embodied the following most important features:—*Simplicity.*—No hand ice machine has ever been produced which will compare with the "Raplin" in this respect. The ice is produced by simply turning a handle. There are no complicated parts to repair, while the whole is worked by a rotary movement which is easy to turn.

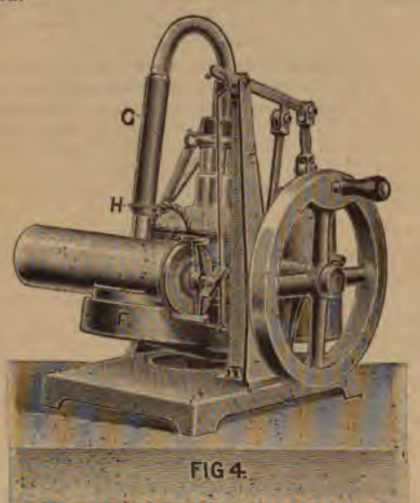

FIG 4.

The illustration herewith (Fig 4) shows the machine ready for use, with ice vessel in position.

The machine will cool a caraffe of water in three minutes, or make a block of ice in 20 minutes. There is no risk or trouble. One charge of ordinary sulphuric acid will make about 75/100 lots of ice. The machine will make ice in any climate regardless of temperature, and will be found useful in many ways, either in the laboratory, on board ship, in hospitals, in country houses, and up-country stations abroad. A machine can be seen in operation at the Company's show-rooms, 61 and 63, Queen Victoria-street, E.C.

THE SODIUM-NITRATE MARKET.

HALF-YEARLY REVIEW.

THE fertiliser trade has generally been more satisfactory, and last season's low scale of values of most elements marks an advance. Nitrate of soda in the extent of its consumption marks a record year, the increase reaching about 10 per cent. overhead. Price, however, has averaged a lower figure than in any previous year, and a continuance of low prices will probably eventually lead to an adjustment of supply and demand, which inefficiently conducted combinations have hitherto failed to effect. The producer has doubly suffered by freights, having ruled fully 20 per cent. above last year's. Sulphate of ammonia, which last year touched a lower price than nitrate, has during the present season maintained a price of 15 to 20 per cent. over that of nitrate, and has, consequently, to a less extent competed with it in its special uses. Other sources of nitrogen have been regulated by these values. Peruvian guano has been imported to a very limited extent, and has found a market at low prices. Phosphates of all kinds have improved in value from 10 to 20 per cent. on prices ruling last year, supply and demand now becoming better adjusted. Potash salts remain at former level. Freights generally have advanced. Nitrate of soda—the six months consumption and export from United Kingdom ports reach about 99,000 tons, against 77,000, 80,000, 81,000, and 85,000 tons in the same six months in 1897 to 1894. The stocks at date are about 10,000 tons, against 16,000, 21,000, 19,000, and 6,000 tons at date in same years. From continental ports the deliveries during the six months reached about 670,000 tons, against (including Harburg) 634,000, 633,000, 559,000, and 543,000 tons in 1897 to 1894; while stocks are about 37,000 tons, against 100,000, 107,000, 60,000, and 18,000 tons at date in same years. Germany shows a falling-off of about 10 per cent. as compared with last year; but France and Belgium each mark an increase of above 20 per cent. The six months consumption in the United States and California has been nearly 70,000 tons as compared with 50,000, 60,000, 55,000, and 45,000 tons during same period in 1897 to 1894. The visible supply, stock and afloat, is about 40,000 tons, against a like quantity last year. Other parts of the world have absorbed about 8,000 tons from direct imports during same period. Stocks in the interior of the Continent are understood to be on a smaller scale than at date last year. The consumption throughout the world during the period July 1 to June 30 may be therefore estimated for 1897-98 at 1,175,000 tons, with an average price of 7s 4½d., for 1896-7 at 1,060,000 tons with 7s. 10d., for 1895-96 at 1,100,000 tons with 7s. 10d., for 1894-95 at 1,040,000 tons with 8s. 4½d. for 1893-94 at 975,000 tons with 9s. 7d., for 1892-93 at 840,000 tons with 9s. 6d., for 1891-92 at 870,000 tons with 8s. 10½d., for 1890-91 at 945,000 tons with 8s. 7d., for 1889-90 at 930,000 tons with 8s. 4d., for 1888-89 at 730,000 tons with 9s 10d., for 1887-88 at 670,000 tons with 9s. 4d., for 1886-87 at 510,000 tons with 9s. 9d., for 1885-86 at 440,000 tons with 10s. 6d., for 1884-85 at 490,000 tons with 9s. 9d., for 1883-4 at 530,000 tons with 10s., for 1882-83 at 430,000 tons with 12s. 3d., for 1881-82 at 350,000 tons with 13s. 9d., for 1880-81 at 250,000 tons with 14s. 6d., for 1879-80 at 170,000 tons with 16s. 3d., for 1878-79 at 280,000 tons with an average price of 13s. 6d. per cwt. The visible supply for Europe consists of about 47,000 tons stocks and 165,000 tons afloat, against 116,000 tons and 168,000 tons at date last year, and 127,000 and 255,000 tons at date in 1896. The deliveries, July to Dec., reached last year 270,000 tons, and in 1896 232,000 tons. The shipments, January to June, have been about 360,000 tons to Europe and 75,000 tons to the United States, &c., against 310,000 and 55,000 in 1897, and 435,000 and 50,000 in 1896 during the same period. The production during the first six months is approximately 600,000 tons, against 500,000 and 650,000 respectively during same period in 1897 and 1896. Stocks in Chili are understood to exceed those of last year by about 100,000 tons. The opening price in January was 7s 4½d. per cwt., and to-day's value is about the same for ordinary quality. No violent fluctuations have been experienced, 7s. 1½d. to 7s. 9d. being extreme points touched, the ruling price during the consuming period being 7s. 3d. to 7s. 6d. The deliveries during the early spring were large on account of the early season, but in May and June they have proved rather under those of last year. Stocks throughout have remained moderate, but the uncertainty of the future and the lower forward prices generally ruling have militated against a higher level of price being reached during the consuming season. Refined quality during the early spring only commanded a moderate premium; but owing to scarcity and an export demand for the United States a premium of 6d. per hundredweight was reached for arrived cargoes in May. Forward shipment cargoes of ordinary have ruled at from 6s. 10½d to 7s. 7½d. per hundredweight. Freights have ruled firm at 23s 9d. to 31s. 3d., as compared with 16s. to 20s. per ton last year during same months. Cost of nitrate has ruled 4s. 6d. to 5s. per quintal, as compared with 6s. to 5s. 2d. last year, while exchange has ranged from 17¾d. to 17d. The duty remains unchanged at about 2s. 4d. per quintal, and no further reduction in railway freight has taken place. The result of present prices to producers and producing companies generally is disastrous.

"La Revue des Produits Chimiques."—Under this title a fortnightly paper has been started in Paris. It is devoted to chemical, drug, colour and varnish trades, and is published at 30 Rue Vieille du Temple, Paris.

Anti-Corrosion Composition.—A new preparation for coating the bottoms of vessels is composed of seaweed, green and wet, ground in oil, and mixed in proper proportions with litharge, lead acetate, turpentine, and linseed oil previously well boiled together.

The S.O. Co. in Canada.—According to a Montreal telegram the Standard Oil Company has effected a lease for five years of every refining plant in Canada, thus securing a monopoly. [Judging by the strong opposition which the S.O. Co has met with in Canada, we have serious doubts whether this is not another sample of S.O. bluff. Ed. C T.J.]

Lautaro Nitrate Company (Ltd.).—The report for the year 1897 states that after writing off the customary expenses of maintenance and renewals, making due provision for the debenture service, and allowing for depreciation of grounds, plant, &c., the net profit, including the amount brought forward, is £37,428. An interim dividend at the rate of 6 per cent per annum has been paid, absorbing £16,500., and the directors now recommend a final dividend at the same rate, leaving £1,728 to be carried forward.

Hills v. Ferro-Sodium Company.—On Monday before Mr. Justice North application was made on behalf of Mr. A. F. Hills, of the Thames Ironworks, for the appointment of a receiver and manager for the defendant company, on the ground that the debentures were in jeopardy. Counsel in support of the application said that ferro-sodium was a flux which was used in the founding of iron, and the business of the company was now in jeopardy owing, it was alleged, to the gross negligence and extravagance of the late managing director.—His Lordship made the order asked for, with a reference to chambers as to the gentleman to be appointed.

MERSEY AND IRWELL JOINT COMMITTEE.

SIX MONTHS EXTENSION FOR MANCHESTER.

A meeting of the Mersey and Irwell Joint Committee was held on Monday at the offices, Moseley-street, Manchester, Sir J. T. Hibbert presiding.

The Consulting Sub-committee recommended that the clerk should be instructed to again write to the Stockport Corporation regretting that no arrangements had yet been made to, at any rate, partially treat the sewage, owing to their not having obtained a supply of water for the engines, and also drawing the attention of the Corporation to the serious nuisance which will be caused by the discharge of raw sewage into the river during the present summer. In order to enable the Corporation to take such steps as may be necessary in the matter it was further recommended that the consideration of the question be adjourned for a month. The report of the Committee was adopted.

ALLEGED POLLUTION OF THE SHIP CANAL.

The Consulting Sub-committee stated that they had received some serious complaints from the Chief Inspector (Mr. R. A. Tatton) as to the discharge of raw sewage from the districts of the Barton Rural Council and the Urmston and Flixton Joint Drainage Committee into the Ship Canal and its tributaries while the crops on the farm were being gathered. As the matter was one of great importance they had instructed the clerk to forthwith take proceedings against the respective authorities to ensure the immediate cessation of the cause of complaint.

This course was approved by the Committee, as was also a recommendation that proceedings be taken against the Prestwich Council in respect of the effluent from its sewage works.

BAD EFFLUENTS OF MANCHESTER AND SALFORD.

Sir Henry Roscoe, it was reported, had laid before the Consulting Sub-committee his analyses of twenty-three samples of sewage effluents from the works of local authorities. Of these, thirteen were stated to be good, two fair, one unsatisfactory, and seven bad effluents. The sample taken from the Manchester Corporation sewage works was described as "turbid, containing a little iron oxide in suspension; slight tarry smell. A bad effluent." That taken from the sewage works of the Salford Corporation was described as "brown, turbid, containing finely divided suspended matter; no smell. A bad effluent."

The consulting Sub-committee reported that the Corporation of Manchester had given formal notice of their intention to withdraw their notice of appeal against the decision of Mr. Yates which was given in the County Police Court, Strangeways, on the 12th May, and also that the Town Clerk had written asking the Joint Committee to receive a further deputation to discuss their present position.

The deputation from the Corporation now attended. It consisted of Sir Bosdin Leech (chairman of the Rivers Committee), Dr. Dreyfus (vice chairman), Mr. Alderman M'Dougall, and the Town Clerk (Mr. W. H. Talbot).

Sir Bosdin Leech, addressing the Committee, said the Rivers Committee of the Corporation, having considered the matter of the appeal against Mr. Yates's recent decision, had agreed, in accordance with the request of the Joint Committee, that the notice of appeal should be withdrawn. The Rivers Committee now desired to ascertain how far the Joint Committee were disposed to meet them with regard to an adjournment. The experts engaged by the former body had been over the Corporation's works, as well as over those of other authorities, and the result of their investigations and inquiries was that they thought it desirable the Corporation should put down four small test filters in addition to those already in use. This the Corporation had agreed to do at once. The experts had further told the Rivers Committee that they believed the effluent could be satisfactorily treated on the 151 acres of land which the Committee already possessed. They could not, however, promise to present their report to the Committee before October. If the effluent did not prove satisfactory and the Local Government Board were not satisfied that the Corporation could treat their effluent on the land they now possessed, the Corporation would be prepared to give a pledge to buy the further quantity which the Board might consider to be necessary. The Rivers Committee would do their best to satisfy the Local Government Board and the Joint Committee. They had certain works in progress, which would be completed in three months, and these would sensibly improve the effluent. He admitted that the effluent was not at present what it ought to be, but he thought there was no great harm being done, and he had now to ask the Joint Committee to give the Rivers Committee as much time as possible for the carrying out of their works.

The Chairman: Would three months be sufficient?

Sir Bosdin Leech: If you give us six months we are pefectly convinced that in that time we shall be able to do something.

The Chairman: We are informed that your experts have been advertising for information to be given them by anybody all over the country on the question of sewage treatment. Does that look as if they were very competent?

The Town Clerk said he was responsible for making the suggestion which led to the advertisement. The reason was that there were persons in the city who had strong views on this question, and it was thought that it would not be fair if an opportunity were not given to everyone who had ideas on the subject to put them forward. The result of the advertisement was that there had only been about 17 applications—not a very large number. Certain newspapers had, he knew, commented upon the action of the Committee in this matter, but it must be remembered that there were many interests involved. The Ship Canal Company and others might afterwards spring upon the Corporation and say they had had a scheme, or that the Corporation had done something that was wrong; it was thought better, therefore, to create an estoppel by giving anybody who wished to do so the opportunity of coming forward before a certain date.

Dr. Dreyfus added that the advertisement was really issued in order to comply with the resolution of the Corporation that the experts should report not only on the scheme laid before the Council by the Rivers Committee, but on any other scheme which might be presented to them; or that they might, in the alternative, prepare a scheme of their own.

In reply to Mr. V. K. Armitage, Sir Bosdin Leech repeated that the Rivers Committee were prepared to give a pledge to purchase more land if the Local Government Board demanded that they should do so.

Mr. Armitage inquired whether the Manchester Corporation would be bound by an undertaking given by their Rivers Committee. There had been occasions, he added, within recent times when the Corporation had thrown over its Committee.

The Town Clerk said the Council had already passed a resolution fully empowering the Rivers Committee to yield to the Local Government Board on the subject of the land to such an extent as might be necessary. As Sir Bosdin Leech had clearly stated, they must, and would, do what the Local Government Board required of them.

Mr. Armitage: That statement from the Town Clerk is sufficient for me.

After some further discussion it was unanimously resolved, on the motion of Mr. T. W. Killick (chairman of the Consulting Sub-committee), seconded by Mr. Alderman Jenkins, of Salford, that the further consideration of the matter be adjourned for six months, as requested by the deputation.

THE TYNE CHEMICAL TRADE.

THE following list has been specially abstracted from the yearly analysis made by the Tyne Improvement Commissioners, of goods imported and exported from the Tyne in 1897. As the figures include coastwise shipments the coastwise total is given as well as the total for the year, the difference being the amount of foreign imports or exports as the case may be. The total for 1896 is given for the purpose of comparison:—

IMPORTS.

Description of Goods.	Coastwise.	Total. 1897.	Total. 1896.
Candles ..... Tons	881	881	894
Cement ..... Tons	149	602	173
Barytes ..... Tons	305	3,663	2,959
Nitre Cake and Salt Cake Tons	6,210	6,210	510
Soap ..... Tons	2,693	2,754	2,634
Arsenic ..... Tons	200	203	153
Chemicals (*o. u.*) ..... Tons	6,482	7,264	8,221
China Clay and Ch. Stone Tons	8,097	8,220	9,637
Glucose ..... Tons	24	370	531
Drysalter's Stores ..... Tons	5,259	5,997	5,882
Cotton and Linseed Cake Tons	666	2,472	2,856
Litharge and Colours ... Tons	1,020	1,476	1,393
Ochre ..... Tons	151	338	659
Bones ..... Tons	—	22	27
Guano and Manure ..... Tons	982	1,012	883
Nitrate of Soda ..... Tons	563	3,646	5,963
Phosphates ..... Tons	143	19,753	18,774
Antimony Ore ..... Tons	709	4,055	2,513
Burnt Sulphur Ore ..... Tons	74,556	74,904	59,552
Copper, Copper Precipitate, and Copper Ore ..... Tons	3,597	12,081	11,734
Iron Ore ..... Tons	76,916	786,618	612,560
Lead Ore ..... Tons	2,748	12,335	8,839
Manganese and Manganese Ore ..... Tons	684	1,172	810
Sulphur Ore ..... Tons	1,362	62,989	57,704
Limespar and Spar Stone Tons	—	617	416
Plaster of Paris & Whiting Tons	1,289	1,289	1,233
Salt ..... Tons	60,444	67,703	75,888
Slag ..... Tons	9,128	9,128	12,046

Description of Goods.	Coastwise.	Total. 1897.	Total. 1896.
Oils, Mineral.....Tons	2,733	23,743	24,722
Other Oils .....Tons	4,316	4,736	4,642
Tar and Pitch (Mineral) Tons	659	735	491
Turpentine, Varnish, and Putty .....Tons	920	932	866
Paper .....Tons	2,539	4,036	3,515
Tallow, Fat, and Grease Tons	594	675	722
Bark, Spent .....Tons	8,751	8,751	7,446
Bark, Tanners' .....Tons	95	1,305	1,264
Cutch .....Tons	4	4	6
Esparto Grass.....Tons	—	11,544	4,569
Resin .....Tons	63	2,487	3,402
Shumac .....Tons	144	144	269
Tar and Pitch .....Brls.	1,356	8,225	5,742
Valonia .....Tons	99	99	117
Wood Pulp.....Tons	435	7,221	6,021

EXPORTS.

Description of Goods.	Coastwise.	Total. 1897.	Total. 1896.
Blacking .....Tons	—	1	4
Alkali and Soda Ash.....Tons	2,211	8,189	8,862
Alum and Alum Cake ...Tons	4,195	4,771	6,084
Ammonia & Sal-AmmoniacTns	—	4,297	3,741
Arsenic .....Tons	19	55	255
Barytes, Carb & Sulph..Tons	1,964	5,668	7,150
Baryta Manufactures.....Tons	499	1,212	1,009
Bicarbonate of Soda .....Tons	7	10	110
Bleaching Powder.....Tons	14,162	25,117	27,209
Caustic Soda .....Tons	6,212	14,999	17,784
Copperas .....Tons	45	124	250
Epsom Salts .....Tons	6	16	42
Hyposulphite of Soda ...Tons	644	1,159	1,258
Magnesia .....Tons	138	335	512
Manure .....Tons	4,592	26,369	24,889
Nitrate of Soda .....Tons	38	54	66
Potash .....Tons	44	60	44
Pearl Harding & GypsumTons	461	832	520
Soap .....Tons	62	100	122
Soda Crystals.....Tons	31,052	36,873	37.281
Sulphate of Soda .....Tons	370	14,513	9,871
Sulphur .....Tons	612	6,536	8,805
Silicate of Soda.....Tons	110	280	377
Chemicals (*o. u.*) .....Tons	202	974	1,720
Cement .....Tons	19,461	26 590	39,042
Fire Clay .....Tons	3 082	11,287	9,093
Glass .....Tons	1,835	2 603	2,738
Glue .....Tons	17	18	16
Ferro Marganese and Speigeleisen .....Tons	79	661	870
Antimony & Antimony Ore Tns	510	1,809	1,249
Litharge .....Tons	120	591	548
Red & White Lead Paint Tons	17,770	21,796	22,159
Lampblack & Coal Dust Tons	217	262	210
Lime .....Tons	461	461	374
Oil, Varnish, & Turpentine Tns	11,229	11,738	12,988
Paper .....Tons	4,180	4,405	4,391
Patent Fuel .....Tons	—	700	—
Plaster of Paris & Whiting Tns	1,027	1,038	1,475
Purple Iron Ore.....Tons	33,091	33,091	62,524
Salt .....Tons	53	84	220
Slag and Mill Cinders ...Tons	1,778	4,682	5,516
Sugar and Molasses .....Tons	44	45	31
Tar, Pitch, & Resin .....Tons	56	363	184
Venetian Red .....Tons	191	231	442
Vinegar and Acids .....Tons	33	116	122
Wood Pulp..... .....Tons	71	71	70
Zinc Ore.....Tons	255	5,196	1,772

Imports.—It is interesting to know to and from what countries the chief shipments of interest go and come, and we therefore append the following special analysis :—Barytes have increased by 704 tons, all from Belgium and Holland, save an item of ten tons from Germany. Nitre and saltcake have risen by 5,700 tons. Nitrate of soda has fallen off by over 2,000 tons, but phosphates show an increase of nearly 1,000 tons, the U S.A. contributing 10,545 tons to the grand total. Algerian phosphates rank third with 2,875 tons. Sulphur ore again shows an advance by over 15,000 tons The only foreign shipment was 348 tons from Germany. Though there is a net decrease in the imports of salt, those from Germany show an advance from 1896.

Exports.—The amount of alkali has decreased by 664 tons Sweden gives place to Russia for the largest demand. The U.S.A. total was 51 tons against 33 in 1896. Ammonia and sal-ammoniac are better by about 500 tons. Bleaching powder has declined 2,000 tons, and caustic nearly 3,000. Belgium and Russia were the largest consumers for bleach, while in caustic the order is just reversed. Out of 26 distinctly chemical items there are only 6 increases. Most of the silicate of soda went to Spain and Gibraltar. Sulphate of soda is one of the articles showing an advance, which is mainly due to Sweden having taken over 8,000 tons.

Parliamentary Jottings.

PHOSPHORUS MATCHES.

In the House of Commons last week, Mr. Monk (Gloucester) asked the Home Secretary whether he was aware that safety matches of a better quality than those introduced from abroad, and of which yellow phosphorus was not a component part, could be readily manufactured in this country and be retailed in London and the provinces at 1½d. per dozen ; and whether he would consider the desirability of obtaining power to make the sale of phosphorus matches illegal, as injurious to the health of the operatives and dangerous to those who use them.

Sir M. W. Ridley (Lancashire, Blackpool).—Yes, I am aware that safety matches of British manufacture, which claim to be made without yellow phosphorus, can be bought at about the price named, though I can hardly, I think, though I have had the advantage of a present of a box from my hon. friend (laughter), enter upon the question of their comparative quality. As regards the second paragraph, I must await the results of the inquiry now being made at home and abroad before coming to any decision ; but the hon. member is, no doubt, aware that it is claimed that by the adoption of certain methods the use of white or yellow phosphorus can be rendered harmless.

A BOY'S DEATH FROM BENZOL "GASSING."

On Monday, Mr. Tennant asked the Home Secretary whether his attention had been called to the death of Thomas Sargeant, age 15, from "gassing" by benzol, in the Whitwood Chemical Works, at Normanton, about a fortnight ago, and to the circumstances attending the inquest ; whether there were no regulations controlling the manufacture or use of benzol ; and, if so, whether the desirability of instituting some regulations would be considered ; and whether, seeing that the coroner had upon previous occasions dismissed applications for inquiry into matters having the gravest results, any action could be taken on his refusal to institute a medical examination into so serious a misadventure.

Sir M. White Ridley said a report had been received from the inspector who was present at the adjourned inquest. The case was still under inquiry, and he was hardly at present in a position to say what steps it was necessary to take. As regarded the action of the coroner, without prejudging the matter, it appeared to him much to be regretted that no post-mortem examination took place, and that no medical evidence came before the jury. He was looking into the matter.

WASHERS AND SCRUBBERS IN GAS WORKS.

A PAPER dealing with the chemical and mechanical aspects of gas purification was read last month by Mr. Edward H. Harman (Engineer to the Huddersfield Corporation) at the annual meeting of the Institute of Gas Engineers. The author first reviewed the chemical composition, &c , of the gas liberated by distillation, which he contended must be studied and considered in order to rightly appreciate the duties of scrubbers and washers. The rest of the subject was then dealt with under the following headings :—

Temperatures.—Both washing and scrubbing could be effected better if a complete control were obtained of the temperatures of the gas at all portions of the apparatus. It is with this object in view that the condensers abroad are generally placed in closed houses Where washers are placed in the open air, the liquor therein frequently falls below 60° Fahr., with serious reduction of the heavy hydrocarbons. It is therefore desirable to have the washing apparatus enclosed.

Tar Extraction— In the United Kingdom the common practice is to extract whatever tar is left in the gas after condensation at the washers and scrubbers ; which has, however, the objectionable point of rendering these portions of the purifying plant less efficient for their particular work. Upon the Continent preference is given to the extraction of tar by means of tar extractors, such as those of MM. Pelouze and Andouins. It is true that this has been adopted in some few works at home, as well as other systems of tar extraction. The separate operation for mechanically extracting the precipitated tar or floating particles is a debatable question. The object of many gas engineers is to condense out the tar, which, of course, necessitates large condensers, certainly larger than would be required if the tar were previously extracted. Even with large condensers it is impossible to condense out all the tar at atmospheric temperatures. Many engineers prefer the gas remaining in contact with the tar as long as possible. It is questionable whether it is desirable to bring down the temperature of the gas to 60° before washing, the object of doing so being principally to reduce the quantity of tar in the gas.

Scrubbers.—The form of tower scrubber most familiar is, perhaps, the Mann and Walker type. It consists of a cylindrical tower, the height being about three to five diameters. A machinery room adds finish and ornament to the top. In the upper portion of the vessel is a brushwood wheel, which receives a supply of clean water from revolving water distributors, ingeniously designed to work eccentrically, so that in traversing the outer circumference of the vessel they travel slowly, but when nearing the centre, rapidly. The gearing is worked by bevel wheels from a vertical shaft, supported from the sides of the vessel. The contained material generally is either coke or boards on edge, although other material is also used. The channelling of the gas and water through coke makes boards preferable. The material is supported on a series of cast-iron grids, leaving each tier distinct and separate for the dispersion and diffusion of the gas The gas enters at the base, meeting the strongest and warmest liquid, and passes from tier to tier vertically to the top of the vessel, where it descends an outlet pipe placed in the centre. The water entering at the top in the form of finely divided spray descends through the material, and the gas being forced through the separate tiers gets well brought into contact with the moisture and sharp edges. Mr. William Mann, formerly Engineer to the City of London Gas Company, and Mr. William T. Walker, with whom the author has had several conversations upon the subject, strongly recommended the gas always to be passed through the scrubber under pressure, instead of exhausted. The gas yields its ammonia to the water, the tar is mechanically arrested by the coke and drains to the bottom of the vessel, the base of which is generally designed to permit the tar and liquor draining to the outlet pipe leading to the stores well. Where a series of tower scrubbers are used, weak ammoniacal liquor is pumped into all, except the last or finishing one, in which clean water is employed. The ammoniacal liquor when treated in this manner becomes a valuable purifying agent, and is also itself much enhanced in value. One advantage of using liquor is, that the hydrocarbons are not deposited as when water only is used. When scrubbers are used in the dry state, that is, without a liquor or water supply of any kind, the material necessarily extracts or retains the tar only.

Tower scrubbers require cleaning out about once in every eight to ten years. They may be partially cleaned at intervals by steaming, always taking care to commence the steaming process at the top, and following down tier after tier so as to allow the condensed water and liberated tar to drain downwards, leaving the upper tiers cleaned. As regards the most desirable material for use in scrubbers, Mr. Livesey (to whom belongs the credit of introducing boards) gives the following relative area of wetted surfaces:—

Coke	8½	sq. ft. per	cubic foot
Drain pipes 2 inches diameter	21	,,	,,
Drain pipes 3 inches diameter	17	,,	,,
Boards	31	,,	,,

It will be seen that, apart from other desirable recommendations, boards present between three and four times the area of coke material.

In a tower scrubber, filled with grids of ⅜-inch by 9-inch boards, with ⅜-inch distance pieces, a very large surface is exposed for wetting, and consequent frictional surface-action on the gas. In a tower desighed for passing 3,000,000 cubic feet of gas per day of twenty-four hours, say 15 feet diameter by 60 feet high, having six tiers of grids, the surface equals 268,000 square feet. These grids occupy 40 per cent. of the cubical capacity of the tower. In the tower there is approximately 10,602 cubic feet, less 4,356 cubic feet filled with material, leaving in the interstices some 6,246 cubic feet. The inside of the scrubber, together with the surface area of the grids, presents 270,820 square feet. The gas passes at 34 feet per second, and will be in the interstices of the material such a time as it takes to fill up the 6,246 cubic feet divided by 34, which equals nearly three minutes. Multiplying the surface, 268,000 square feet, by the time, three minutes, 804,000 square feet is obtained, which is the value of contact with the gas passing. The result may be written $\frac{\text{total surface}}{\text{volume of gas}}$, which expresses the amount of contact surface available for each volume of gas. The capacity of any washing machine may be gauged from this rule, independent of design. Again, gas, as has been referred to, may readily be reduced to bubbles of a very small diameter, and by this means the contact surface can be obtained equal to any other. Suppose the gas is divided into bubbles of ¼-inch diameter. Then for each foot of gas we obtain about 288 square feet of surface area. As gas rises through one foot of liquor in about one second, for this to equal the capacity of the tower scrubber described, it would have to pass through a column of liquid 27 feet deep. The expenditure of power to effect this would be very much in excess of the force required to deliver 13 gallons of water to the top of the tower.

The late Mr. Wyatt recommended 100 cubic feet per ton per diem of internal capacity of the vessels, with a gas contact of from 15 to 27 minutes for maximum and average makes, and stated that 12½ to 15 per cent. of this volume could be utilised by introducing a washer into the base of the scrubber. The volume of gas contained in the scrubbers at one time amounts to about 1 per cent. of the maximum make per diem. The horizontal nett area of all the scrubbers recommended by Mr. Wyatt is equal to two superficial feet per ton per diem on the maximum make.

The late Dr. Ferdinand Hurter's paper upon coke towers and similar apparatus communicated to the Soc. Chem. Ind. in 1893, is a valuable contribution to this subject.

Water Distributors.—It is difficult to ensure thorough distribution over all the whole area of a large scrubber, although accomplished at the first tier; the liquid collects and drains in channels through the remainder. The author has tried steam jets in each tier, with good effect as to saturating the material all over, but the increased temperature of the gas prohibits its use. The Barker's Mill arrangement is perhaps one of the best forms. Gurney's jet consists of a sliding tube with a nozzle, having a fine hole one sixty-fourth of an inch in diameter. The liquid is forced through this at considerable pressure, causing it to impinge against a circular glass disc. Green's water distributor, Goldsmith's, and many others, might be cited.

Washers.—Washers are of numerous designs. The gas passes through a series of perforated plates, brushes, bundles of grids, and many other devices placed in chambers, and being constantly wetted. The surface of these, and the contact, are enormously increased in many cases by constant revolution, and possess advantages, inasmuch as the liquor is retained without pumping, being gradually run off as the strength increases. The gas leaves behind the larger portion of its ammonia in the chamber. The liquor, being retained, is consequently worked up to a far higher degree of saturation. An analysis of the liquor from one of these washers shows the action of the gas clearly. In the first chamber a little fixed ammonia is obtained, while free ammonia, or that held in solution with such weak acids as carbon dioxide, will seem to have displaced the sulphuretted hydrogen, it being found there in the proportion of 70 per cent., compared with the sulphuretted hydrogen similarly held. In the latter chambers the sulphuretted hydrogen seems to enter more into solution. In the last chamber it is side by side with the carbon dioxide, and is found up to 50 per cent. The acid equivalents throughout the series get gradually less. The proportion of carbonic acid and sulphuretted hydrogen in the liquor, and the proportion they bear in relation to each other, vary, principally owing to the strength of the liquor, and partly under the circumstances of formation. Generally between 50 to 70 equivalents of alkaline ammonia is combined with 50 to 70 equivalents of the acids, carbon dioxide and sulphuretted hydrogen, the sulphuretted hydrogen of which forms nearly 20 per cent. The strong liquors contain less than the weaker ones.

The operations of washing remove two or three grains of carbon bisulphide per 100 feet, and the illuminating power is slightly diminished.

It has been shown why the alkaline and acid bodies do not combine to eradicate themselves, on account of their non-affinity at the partial pressures in which they exist in the gas. It has also been shown why the water compared with the solubility is insufficient to eliminate the ammonia. When the pressure becomes more attenuated, then the forces between the dissociability of the weak solution more nearly approximate equilibrium, a rise in temperature effecting the liberation of a small quantity, or a corresponding lowering effecting the absorption. The relative capacities of washing the gas by rain vapour; material spread surface contact; breaking the gas into bubbles, and by the presentation of new surface area to the action of the gas in the various forms of mechanically worked washers, have been pointed out. Rain and vapour is of little practical use, the mechanical force necessary to present it in this form being far from the advantage derived from washing the gas by breaking it into bubbles. The mechanical force necessary to break the gas into bubbles, simple as it appears, is greater, while the surface thus obtained is less than required for passing the gas through tower vessels with large surface area. Even these are behind mechanical washers of various kinds, as their surface contact can be regulated, and is also enhanced by utilising strong liquors for the crude gases. While considering the surface contact, it may be mentioned that a limit may be obtained in the fineness of the layers presented to the surface, insomuch as the material required to do this occupies a greater portion of the cubic area of the tower or machine, thus accelerating the flow of the gas, and not allowing the time contact necessary for the absorption of the constituents it is desired to extract.

(*To be continued*)

SALT IN THE ISLE OF MAN.—The Liverpool syndicate which has been conducting borings in the Isle of Man to find if possible the continuation of the seam of coal which dips under the sea at Whitehaven, has failed in its object, but it is nevertheless fortunate in having come across immense beds of rock salt, which are so promising that plans have been drawn up for the constitution of a port, estimates for carrying steamers have been obtained, and the old shipyard at Ramsay has been purchased with the intention of establishing a great salt industry.

Trade Notes.

Manchester Corporation and their Gas Residual.—At the last meeting of the Committee of the Manchester and Salford Sanitary Association, Mr. W. Thomson, F.R.S. (Edin.) was requested to introduce at the next meeting of the Committee the subject of the manufacture of gas residual products, with a view to urging upon the Manchester Corporation the importance of undertaking this work themselves, both on financial grounds and with a view to having the operations conducted with up-to-date appliances, which would prevent the serious nuisances now the cause of so much complaint in Ancoats.

The Finances of the Manchester Rivers Committee.—The Finance Committee of the Manchester Corporation have had under consideration the financial position of the Rivers Committee in relation to the expenditure on sewerage and sewage disposal works. It appears that the adverse balance upon this account has increased from £29,474 on November 22 to £62,597 on the 16th ult. The Local Government Board have declined, except upon certain conditions, to sanction further borrowing powers, and as further sums are being expended attention has been drawn to the matter by a report of Mr. Thackray, the City Treasurer. It is stated that "As the requirements of the Rivers Committee (exclusive of effluent treatment) may reach £170,000—the amount estimated on the 2nd June, 1897—the Council are drifting into a serious financial position. It is therefore desirable that the Finance Committee should again draw the attention of the Rivers Committee to the matter, with a view to their taking such steps as may be necessary to obtain the borrowing powers required for sewerage purposes." The matter was the subject of discussion at the last meeting of the Rivers Committee, when it was referred to a small sub-committee and the Town Clerk for a report. This Committee contemplate borrowing £160,000 for sewage treatment purposes, and correspondence has taken place with reference to the Local Government Board inquiry which will be held into the application for sanction to borrow the money. Mr. A. D. Adrian, C.B., Assistant Secretary to the Board, has been informed by the Town Clerk that the Committee are not yet in a position to present a general outline of the scheme or proposals of the three experts whom they have engaged, but that a further communication will be forwarded to the Board as soon as a definite statement can be made or a definite date for the inquiry suggested.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols keep at the same dead level of 10d. for 90's and 10½d. for 50/90's. There is really nothing to be noted in carbolic acids or naphthas, the market being well balanced. Creosote is one of the best of the tar products just now, for what it is worth. Anthracene is selling at even lower values. 30% B has been sold at 3½d., quotation now ranging from 3½d. to 3¾d. Pitch quiet at 23s f.o.b. East Coast.

Sulphate of ammonia has gone very flat, and prices have dropped considerably. Beckton is no longer offering for prompt, and is reported as being well sold. For forward £9. 5s. is their quotation for Oct./Dec. delivery. Closing prompt value in London outside makes is £9. 5s. to £9. 6s. 3d; Liverpool, £9 5s.; Hull, £9 5s; and Leith, £9. 3s 9d. Nitrate firm.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali market trade is rather dull, and prices all round are somewhat weaker. The spot market quotations for caustic soda, however, remain unchanged as follows: 77%, £8. 5s.; 74%, £8.; 70%, £7. 2s. 6d; 60%, £6. 2s. 6d. f.o.b. Liverpool. Forward business can be done on easier terms. Bleaching powder is exceedingly quiet both for home and export. Price nominally unchanged at £5. f.o.r., and £5. 10s. to £5 15s. f.o b. Liverpool. In chlorates there is a still further slight decline, potash at 3⅛d. to 3¼d., and soda 3⅝d. per lb. Ammonia alkali £4. 2s. 6d. bags, f.o.r. works. Soda crystals and bicarbonate unchanged in price, and the demand is good. Sulphate of copper firmer at £16. 5s. f.o.b. Sulphur, £4. 12s. 6d. f.o.r. Saltcake 23s. to 24s. in bulk f.o.r., and moving more freely, with good inquiry for forward delivery. Brown acetate of lime is easier at £5. 2s. 6d. c.i.f.; grey, at £7. per ton. Acetates of lead quiet, and without alteration in values. Acetate of soda £11. 5s. c.i.f. For potash, caustic and carbonate, there is continued good inquiry, and prices are firm. Yellow prussiate of potash is a turn easier at 6⅝d. per lb. Cyanide, at 1s. 2d. per lb. White powdered arsenic steadier at £16. to £16. 5s. Garston for best brands. Bichromates unchanged. General reports indicate a quietness of trade in miscellaneous chemicals used in the textile trade.

REPORT ON MANURE MATERIAL.

There is not much doing and there is no feature in the market upon which to comment specially.

The quotation for 77/80% Florida phosphate rock is 6½d. to 6¾d. per unit, according to port, c.f.i. 1899 steamer shipment, and for Algerian 58/63% and South Carolina rocks the nearest value is probably 6⅛d. per unit.

There is nothing reported in River Plate bones, but owing to special cheap homeward freight, sales of Kurrachee bone meal for autumn shipment have been made at £4. 2s. 6d. per ton, ex quay Liverpool. From store Liverpool, the quotation for fine bone meal is £4. 7s. 6d. per ton, but there are no buyers at the price. The value of common grinding bones is about £4. per ton, ex quay Liverpool.

Nitrate of soda is firm, and the spot price for ordinary quality is 7s 7½d. per cwt. Refined quality being scarce, is held for 7s. 10½d. per cwt.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 45s. 10½d.; Middlesbro', 40s. 1½d. cash; and hematite, 50s. 6d. Copper easier: Chili bars, G.O.B.'s and G.M.B.'s, closed at £50. 10s. to £50. 15s. cash, and £50. 16s. 3d. to £51. 1s. 3d. three months. Tin weaker: Straits closed at £71. 17s. 6d. to £72. 7s. 6d. cash, and £72 6s 3d. to £72. 16s 3d. three months; Australian, £72. 6s. 3d; English ingots, £74. 15s. Lead easy: Spanish, £13. 1s. 3d. to £13. 3s. 9d.; English, £13. 7s. 6d.; Silesian spelter, ordinary, £20. 5s. to £20. 7s. 6d. Nickel, 1s. 2½d. Antimony, £37. to £38. Quicksilver: First hands, £7. 12s. 6d.; second hands, £7. 12s. *Copper shares* quiet: Cape, 4¾ to 4⅞; Copiapo, $2\frac{5}{16}$ to $2\frac{7}{16}$; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅛ to 3⅜; Rio Tinto, $26\frac{13}{16}$ to $26\frac{15}{16}$; Tharsis, 6 to 6¼.

GLASGOW, Wednesday.—Market easier, and a small business. Scotch done at 45s. 11d. cash and 46s. 1d. month; buyers, 45s. 10½d. cash; sellers, 45s. 11d. Cleveland done at 40s. 2d. cash, and 40s. 4½d. month; buyers, 40s. 1½d. cash; sellers, 1d. more. Cumberland hematite done at 50s. 7½d. cash, and 50s. 10d. month; buyers, 50s. 6d. cash; sellers, ½d. dearer. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is quiet, with little doing. Olive is now quoted £28. to £30. per tun for Spanish, but the market is quiet, however, thereat. Linseed is unchanged at 18s. to 18s. 6d. per cwt. for Liverpool makes in export casks. Cottonseed is very quiet at 15s. 9d. to 16s. 3d. per cwt. Liverpool refined. There is fairly well doing in castor oil at 3⅜d. for Calcutta (good seconds); French (first pressure), 3⅛d. to $3\frac{3}{16}$d.; and Madras $3\frac{3}{16}$d. per lb. Tallow is weakening, and there is only a moderate business passing in view of a decline later. Resin is slow of sale, even with common down to 4s. 6d. cwt.; medium remains at 5s. 3d. to 6s., and fine 6s. 6d. to 7s. 6d. Spirits of turpentine are meeting with a moderate demand at 21s 9d. cwt. Petroleum dull and featureless, with American 5⅞d. to 6¼d., and Russian refined 5d. per gallon.

CAKES.—The tone of the market for American Western linseed on the spot is a shade steadier, £5. 10s. to £5. 12s 6d. is now quoted, at which there is rather a better demand. Liverpool makes again declined partially 2s. 6d., consumers still buying to only a very limited extent at the reduced range of values now current, viz. £7. 5s. to £8. 5s. per ton, according to brand. Good to choice brands of American decorticated cottonseed continue to have rather a dragging market, business being quite limited in extent, but sellers are not forcing the market, and the quotation remains without alteration to report at £5. 7s. 6d. to £5. 15s., according to quality, and Liverpool makes are also selling in retail at previous rates, viz. £6. to £6. 15s. per ton, according to brand. Liverpool undecorticated makes are steady in value at £4. to £4. 15s. according to brand, but buyers operate very sparingly thereat. Egyptian are quoted £3. 10s. to £3. 15s. per ton, but there is very little business passing thereat.

COLOURS.—Prices are steady, and practically without change.; Ochres: Oxfordshire—common £10., medium £12, best £15., Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9.s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The markets here are spiritless and slow. In taking a general review of the situation there are many signs which appear to

indicate that manufacturers are not fully alive to foreign competition. There is too much ready-made feed cakes and manufactured or foreign expressed oil being imported, coupled with heavy falls in the amount of oil producing seeds imported, against which more capital is being laid out in new mills when the old ones are not fully employed. The stocks of seed in Hull, month ending June, were—Linseed, 2,334 qrs, against May, 2,809 qrs.; rapeseed, 67 qrs, against 90 qrs.; cottonseed, 1,685 tons, against 1,475 tons. The imports for the month ending June have been—Linseed, 27,054 qrs. against 25,766 qrs; rapeseed, 5,214 qrs. against 6,592 qrs.; cottonseed, 4,546 tons against 8,375 tons. Linseed oil is of slow sale, spot 15s 10½d. sellers, forward July-August 15s 9d. last four months 15s. sellers. Boiled, £1. to £1. 10s. per ton extra. Refined cotton oil, spot naked, and to August 13s. 7½d.; forward Nov./April 13s. 3d. sellers; crude spot and to August 12s. 6d. Casks £1, and barrels £1. 10s. per ton extra. Castor oil in all positions a trifle easy. Olive oils have a tendency to fall in values, against which advices to hand for olive oil soaps are put up 10s. per ton. Cod oils unchanged from £16. to £18. per ton, casks free. Resin remains firm and unchanged.

CAKES.—Most of the largest crushers are experiencing very poor demand, and are practically closed; still prices are fully maintained. Linseed quiet but steady, 95% pure, £7. 2s 6d. to £7 5s. per ton; Oilcakes (linseed) £6. 5s. to £6. 7s. 6d.; Russians, £6. 15s. to £7. Cotton cakes a slow sale, but prices unaltered. Best makes, £4. 2s. 6d. to £4. 3s. 9d.; seconds, £4. to £4. 1s. 3d. Decorticated, £6. 2s. 6d. to £6. 5s. Meal, £6. 5s. Rape cakes unaltered.

PAINTS.—Makers of these goods are better situated, business being good. Prices unaltered. Disinfecting powder, 5% carbolic, £3.; 10%, £3. 10s.; 15%, £4. Sanitary fluid, 10d. to 1s per gallon. Black varnish, £5. per ton in barrels.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Last week sulphate of ammonia came under the stiffening influences usual at the end of the month, and a summit of £9. 7s. 6d. (prompt Leith) was touched. At this figure a considerable quantity of stuff was bought for the fulfilment of previously made engagements, but directly these were satisfied an easy feeling became perceptible, and the value now is probably little, if anything, over £9. 5s. Glasgow and West of Scotland annual holiday stoppages are at hand, causing a restriction of business, which is increased by the stocktaking which many firms of this quarter embark on, and carry through just before the closure. Notwithstanding the lull in the market due to these causes, prices are pretty well kept up, and there are no notable drops. Mineral oils and paraffins are all fairly firm, for the season, at the old prices, as given below.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett Tyne, soda ash, 48/52°, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, 48/52°, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 10s. to £5. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 2s. 6d., 60/62° £6. 2s. 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s. 0d. nett, Tyne; saltcake, 25s 0d. borax, English, refined, £14., and boracic acid, £24. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s., nett, Liverpool; bichromate of potash, 3¾d., nett for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); bichromate of soda, 3d. nett, for Scotch and English deliveries (for export, 2¾d. nett, f.o.b. Glasgow); chlorate of potash, 3¼d. less 5%. Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £9. 5s. 0d. to £9. 6s. 3d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £15. 17s. 6d. less 5% any port; paraffin scale, hard, 1⅜d. to 1½d. per lb., soft, 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb.; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 5¾d., and crystal, 6d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue quiet, with prices unchanged. Sulphur is scarce, and quoted at £5. per ton net. Soda crystals in fair demand at £2. 12s. 6d. per ton, gross weight locally. Caustic, 70%, £7. 5s to £7. 10s. per ton; 76/77%, £8 5s. to £8. 10s. per ton.

Bleaching powder, sorts, £5. 10s. per ton, nett; do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8. 10s. and 70% £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. 0s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; chlorate of potash, 3¼d. per lb., less 6% f.o.b. Liverpool; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do. 90/95% crude calcined, £6. per ton nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady in demand at 9s. 6d. to 10s per ton.

COALS.—Market is still very firm, and a strong demand still prevails for steam coals, both best and smalls. Gas coals are also very steady. Coke remains firm for both export and home consumption, with increasing demand. Best Northumbrian steam, 13s. 6d to 14s. per ton; second qualities, 12s. 6d. to 13s. per ton; small steam, 5s. 6d. to 6s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 9s. 6d. to 10s. per ton; household coal, 10s. to 11s. per ton; coke, 18s. to 21s. per ton.

New Companies.

Hamblet's Blue Brick Co., Ltd.—CAPITAL £120,000. in £1. shares (60,000 6 per cent. cum. pref). This company has been formed to acquire and carry on the business of a brick, tile, and terra-cotta manufacturer and merchant, carried on by J. Hamblet at the Piercy Brick and Tile Works, West Bromwich, and to adopt an agreement with J. Hamblet. The subscribers to the memorandum of association are: H. E. Broad, 1, Walbrook, E.C., chartered accountant; S. C. Leman, 75, The Lawn, Shepherd's Bush Green, clerk; G. O. Farrar, 110, Warwick-street, Eccleston-square, S.W., clerk; D. T. Walter, Greenhithe, Kent, clerk; H. Tulloch, The Hollies, Bickley, Kent, major; J. Parker, South Lodge, Nottingham, civil engineer; J. Hamblet, Chelsham, Warlingham, brick manufacturer.

P. F. Bourke and Co., Ltd.—CAPITAL £10,000. in £1. shares. This company has been formed to acquire and carry on certain chemical works carried on at East Moors, Cardiff, as P. F. Bourke, chemical manufacturer, and to adopt a certain agreement. The subscribers to the memorandum of association are:—G. V. Perry, Home Lodge, Neath, agent; W. Jones, 68, Brynymor-road, Swansea, clerk; R. J. Smale, Coedsalson, Sketty, nr. Swansea, clerk; C. L. E. Nash, 21, Walters-terrace, Swansea, clerk; H. T. Parsons, 86, Mansel-street, Swansea, clerk; W. E. Smale, Beach-street, Sketty, Swansea, clerk; E. N. Jones, 24, Wind-street, Swansea, solicitor.

Irish Calcium Carbide Co. Ltd.—CAPITAL £60,000. in £1. shares. This company has been formed to acquire and take over the Camphill Mills, and water powers' installation of plant, etc., at Collooney, co. Sligo. The subscribers to the memorandum of association are—A. Sim, Collooney, co. Sligo, merchant; A. Crichton, Carrowgarry, Sligo; C. Brittifee, Tully, Sligo, gas engineer; C. J. Henry, Ardiasmon, co. Sligo, farmer; J. Hosie, Dromahair, co. Leitrim, merchant; H. C. Tweedy, 7, Clare-street, Dublin, M.D.; M. Fitzgerald, 91 and 93, Middle Abbey-street, Dublin, wine merchant. Registered office, Collooney, co. Sligo.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 25th.

Acetic Acid and Acetone—

Holland,	94 pks.	A. & M. Zimmermann

Acetone—

Germany,	£100	Butler's Wf., Ld.

Acids—

Holland,	140 pks.	Little & Johnston

Alkali—

Germany,	203 c.	Spies, Brs & Co.

Alum—

Germany,	£30	R. W. Greeff & Co.

Antimony Ore—

Canada,	430 t.	L. & I. D. Jt. Co.

Asbestos—

Russia,	£250	Bailey & Leetham, Ld.
Germany,	28	Butler's Wf., Ld.

Barium Chloride—

Germany,	£90	Petri Brs.

Barytes—

Germany,	22 pks	R. W. Greeff & Co.
"	49	J. L. Lyon & Co.
Belgium,	208	"
Holland,	74	"
"	19	J. Owen
Belgium,	34	W. Harrison & Co.
"	250	J. Harrison

Bleaching Powder—

Holland,	£55	J. M. Steel & Co.
France,	110	"
Belgium,	166	H. Wallace & Co.

Bones—

Belgium,	30 t.	J. R. Francis & Co.

Caoutchouc—

France,	6 c.	Girard Brs. & Co.
Straits,	94	Huttenbach & Co.
"	1,502	E. Boustead & Co.
"	282	Butler's Wf., Ld.
"	107	R. & J. Henderson
"	850	H. W. Jewesbury & Co.

Cape, 25 L. & I. D. Jt. Co
,, 10 Brookes & Green
Bengal, 34 Ralli Brs.
Straits, 41 W. A. Collins
,, 897 L. & I. D. Jt. Co.
Holland, 40 Anderson, Weber & Smith
,, 10 S. Figgis & Co.
,, 10 W. M. Smith & Sons
Germany, 49 F. Huth & Co.
Straits, 143 Kleinwort, Sons & Co.
France, 14 H Johnson & Sons
Sydney, 44 McIlwraith, McEacharn & Co.
Burmah, 46 Prop. Hay's Wf.
Straits, 255 Soundy & Sons
Borneo, 50 Gilman Brs & Co.
Belgium, 137 Prop. Bull Wf.

Carbolic Acid—
Germany, £25 J. M. Steel & Co.
,, 75 pks. J. G. Back

Carbonic Acid—
Holland, 100 pks. J. Barber & Co.

Castor Oil—
Italy, 30 cs. Davy Hill, Son & Co.
France, 5 brls. F. Boehm
Italy, 5 A. Laming & Co.
E. Indies, 133 cks. Cayzer, Irvine & Co.

Caustic Potash—
Belgium, 100 c. Beresford & Co.
France, 110 W. E. Cole

Chemicals (*otherwise undescribed*)
Germany, £708 A. & M. Zimmermann
Queensl'd, 150 L. & I. D. Jt. Co.
Holland, 33 Phillipps & Graves
Belgium, 18 John Cockerill Line
Germany, 18 Craven & Co
,, 17 Butler's Wf., Ld.
Holland, 30 Hernu, Peron & Co.
,, 6 T. H. Lee
Germany, 15 Phillipps & Graves
,, 520 L. & I. D. Jt. Co.
,, 5 Brit. Anti. Fouling P. Co.
Belgium, 180 T. H. Lee
Germany, 28 H. Lambert

Citrate of Lime—
Italy, £706 Thames S. T. & L. Co.

Citric Acid—
France, £2 B. & F. Wf. Co.

Cream of Tartar—
Italy, 150 pks. B. Jacob & Sons
France, 10 B. & F. Wf. Co.

Cresylic Acid—
Germany, 50 pks. Hollinghurst & Co.

Disinfectants—
Germany, £20 A. & M. Zimmermann

Dyestuffs—
Argols
Italy, 1,644 pks. B. Jacob & Sons
,, 37 Thames S. T. & L. Co.
Cochineal
Canaries, 4 pks. W. M. Smith & Sons
,, 2 Sperling & Williams
Cutch
Straits, 958 pks. A. Howden & Co.
Burmah, 500 Leach & Co.
Extracts
Austria, 34 pks. Hoare, Wilson & Co.
France, 475 Boutcher, Mortimore & Co.
,, 96 S M. Frankenstein & Co.
,, 25 B. & F. Wf. Co.
Gambier
Straits, 202 pks. J. W. Cook & Co., Ld.
,, 369 Beresford & Co.
,, 252 Brown & Elmslie
,, 1,191 G. R. Haller, Ld.
,, 1,216 E. Boustead & Co.
Indigo
Madras, 15 chts. J. Owen
,, 21 pks. J. W. Cook & Co., Ld.
,, 59 chts. Parsons & Keith
,, 7 R. Von Glehn & Sons
,, 13 P. Macfadyen & Co.
,, 39 L. & I. D. Jt. Co.
Sydney, 12 ,,
Bengal, 254 Lewis & Peat
Mimosa Bark
Adelaide, 26 t. McDougall & Bronthron
Myrabolams
Bengal, 683 pks. Marshall & French
Shumac
Italy, 1,000 pks. J. Kitchin, Ld.
,, 50 J. Norrenberg & Co
,, 500 C. S. Lovell
Tanners' Bark
Melbourne, 11 t. W France & Co., Ld.
Cape, 50 Boutcher, Mortimore & Co.
Adelaide, 56 H. Devitt & Co.
Cape, 836 A. & W. Nesbitt
,, 15 Anning & Cobb
,, 106 Flack, Chandler & Co.
,, 875 J. T. Rennie, Son & Co.
N. Zealand, 8 Von der Meden & Co.
Turmeric
Bombay, 152 pks Butler's Wf., Ld.

Dyestuffs (*otherwise undescribed*)
France, 1 ck. Burnett Brs. & Sons

Farina—
Italy, 976 pks. C. Tennant, Sons & Co
Holland, 50 J. Knill & Co.

Glucose—
U. States, 50 pks. 287 c. J. Keiller Ld.
,, 723 4,322 R. G. Hall & Co.
,, 1,000 1,000 G. Thompson & Co.
France, 200 200 W. E. Cole
,, 200 200 Trier, Meyer & Co.
U. States, 100 550 Ohlenschlager Brs.

Glue—
France, £30 Mory & Co.
Germany, 20 L. & I. D. Jt. Co.
U. States, 38 Armour & Co.
Belgium, 975 J. Barber & Co.
Germany, 65 Phillipps & Graves
Holland, 61 T. H. Lee
France, 298 J. Harrison
,, 50 Burnett, Brs. & Sons
Holland, 27 Phillipps & Graves
U. States, 50 L. P. D. Co.

Glue Stock—
Germany, 381 bls. W. Balchin, Ld
,, 6 L. & I. D. Jt. Co.
N. Zealand, 1 T. J. & T. Powell

Glycerine—
Germany, £60 R. W. Greeff & Co.
France, 109 D. & W. Gibbs Ld.
Holland, 40 J. Owen

Lead Acetate—
Germany £702 F. Boe m

Lead Nitrate—
Holland, £25 J. Barber & Co.

Manganese Ore—
Germany, 5 t. J. Barber & Co

Manure—
France, £20 Brasch & Rothenstein
Germany, 100 F. W. Berk & Co., Ld.
Portugal, 4 L. & I. D. Jt. Co.
Canaries, 2 A. & W. Nesbitt

Mercury—
Spain, 11,200 flsks. N. M. Rothschild & Sons
,, 20 bskts A Faber & Co.

Mica—
E. Indies, £340 W. M. Smith & Sons
,, 120 Dundee, Perth, & London S. Co.
Germany, 16 Craven & Co.

Molasses—
Germany, 50 brls. 250 c. G. Hornsée
,, 666 3,470 J. R. Francis & Co.
Holland, 488 6,088 J. W. Cook & Co., Ld.
U. States, 125 680 C. S. Anderson

Naphtha—
France, 20 cks. E. J. Catlin

Ochre—
Holland, 6 pks. Phillipps & Graves
France, 60 Ellam, Jones, & Co.
,, 6 O'Hara & Hoare
,, 20 Wilkinson, Heywood, & Co.

Paraffin Scale—
U. States, 78 brls. Lon. & Til. Ltge. C. & D. Co.
,, 2,417 Anglo-American Oil Co., Ld.

Paraffin Wax—
Burmah, 795 bxs. H. Hill & Sons

Pearl Ash—
France, 232 c. F. W. Berk & Co., Ld.

Phosphate of Lime—
France, 213 t. Anglo-Contl. Guano Works

Phosphate Rock—
France, 210 t. Anglo-Contl. Guano Works
Algiers, 500 ,,

Pitch—
Germany, 241 cks. Fellows, Morton, & Co.
Spain, 4 brls. J. Knill & Co.

Plumbago—
Germany, 8 cks. J. Barber & Co.
,, 64 J. Thredder, Son, & Co
,, 20 Brown & Elmslie
Germany, 18 B. Gallaway
Ceylon, 3,050 Morgan, Crucible Co.
Germany, 6 Butler's Wf., Ld.
,, 32 J. Puddy & Co.
Ceylon, 80 L. & I. D. Jt. Co.
,, 95 brls. Doulton & Co.
,, 56 J. Swire & Sons

Potash—
Germany, 8 dms. J. M. Steel & Co.

Potassium Bromide—
Germany, £22 R. W. Greeff & Co.

Potassium Carbonate—
Belgium, 100 c. Petri Brs.
Germany, 140 ,,
France, 190 W. E. Cole

Potassium Cyanide—
France, £215 Burnett Brs. & Sons

Potassium Oxychloride—
Sweden, £125 G. Boor & Co.

Potassium Permanganate—
Holland, £193 R. W. Greeff & Co

Potassium Prussiate—
Germany, £455 Blagden, Waugh, & Co.

Pumice Stone—
Italy, 1 t. Capt. Dyer

Pyrites—
Spain, 1,020 t. Mason & Barry
,, 2,705 C. Tennant, Sons, & Co.

Rosin—
U. States, 1,840 brls. E. Cook & Co.
,, 300 T. Nickels & Co.

Saltpetre—
E. Indies, 225 bgs. H. W. Peabody & Co.

Soap—
France, £50 Beck & Pollitzer
,, 16 G. T. Mann
Holland, 56 Hernu, Peron, & Co.
Germany, 80 Phillipps & Graves
Holland. 100 J. Owen
Portugal, 92 J. W. Cook & Co.

Soda—
France, 100 c. Petri Brs.
,, 232 Burnett Brs. & Sons
Holland, 200 R. W. Greeff & Co.

Sodium—
Holland, £101 Gas Light & Coke Co.

Sodium Prussiate—
Germany, £560 Blagden, Waugh, & Co.

Starch—
U. States, 200 pks. R. G. Hall & Co.
Holland, 1,422 Little & Johnston
Belgium, 420 T. H. Lee
,, 60 Taylor Brs.
Germany, 4,020 Horne & Co.
Holland, 15 Phillipps & Graves
U. States, 200 R. Bennett & Co.
,, 300 C. Tennant, Sons, & Co.
Holland, 128 Hernu, Peron, & Co., Ld.
Belgium, 80 Becker & Wagner
,, 20 Leach & Co.
U. States, 20 L. & I. D. Jt. Co.

Stearine—
France, 20 bgs. Beresford & Co.
U. States, 50 cks. Lon. & Til. Ltge. C. & D. Co.
Belgium, 12 H. Hill & Sons

Strontia—
Holland, £30 J. Owen

Sulphur—
Italy, 1,476 t. J. Kitchin, Ld.
,, 400 Deering & Robottom
,, 2,001 G. Poor & Co.
,, 100 Typke & King
,, 220 Hyslop, Symonds, & Co.
,, 302 J. Puddy & Co.
,, 100 Soundy & Sons
Spain, 200 Union L. Co., Ld.
,, 300 J. Forster
Italy, 362 F. C. Devon & Co.
,, 10 A. F. White & Co.
,, 5 Davis & Soper
,, 39 F. Smith
,, 5 Union Ltge. Co, Ld.
,, 12 J. Moreton & Co.

Talc—
France, £20 B. & F. Wf. Co.
,, 40 Blackwell & Co.

Tallow—
Queensl'd, 462 cks. Elkan & Co.
,, 123 Phillipps & Graves
,, 106 J. R. Francis & Co.
N. Zealand, 54 A. Brookshank & Son
Cape, 12 Brown & Elmslie
Holland, 10 Phillipps & Graves
N. Zealand, 200 Dalgety & Co.
,, 18 Nat. M. & A. Co.
,, 152 Flack, Chandler, & Co.
,, 300 J. W. Cook & Co., Ld.
,, 64 Lucas & Spencer's Wf.
U. States, 72 ,,
N. Zealand, 20 T. Pearson & Co.
,, 41 Culverwell, Brooks, & Co
,, 234 Phillipps & Graves
U. States, 5 Wilson & Furness Co.
,, 10 Finsler & Wheeler

Tar—
Germany, 10 brls. W. Beard & Sons
France, 588 Burt, Boulton, & Co.
N. Russia, 48 Linck, Moeller, & Co.

Tartaric Acid—
Holland, 10 pks. B. & F. Wf Co.

Ultramarine—
Germany, 2 pks. H. Brooks & Co.
,, 20 Steinhoff, Sons, & Co.
Holland, 2 Phillipps & Graves
,, 15 J. Barber & Co.

Varnish—
Germany, 2 pks. Becker & Wagner
Belgium, 2 W. A. Wilson

Verdigris—
France, 3 cks. C. F. Gerhardt

White Lead—
Holland, 15 pks. Randall Brs.
,, 59 F. G. Clifford
,, 24 H. B. Alder & Co.
Germany, 18 Perkins & Homer
,, 25 Brandram Brs. & Co., Ld
Belgium, 24 T. & W. Farmiloe, Ld.
Norway, 20 M. D. Co.
Holland, 51 Wilkinson, Heywood & Co.

Wolfram Ore—
Germany, 3 t. H. Bath & Son

Wood Pulp—
Norway, 80 pks. G. Hagborg & Co
,, 250 Tegner, Price & Co.
Belgium 10 W. D. Cork, Jr.
Germany, 6 Butler's Wf., Ld.
U. States, 86 Taylor Brs.
Norway, 300 Christophersen, Andrews, & Co.
,, 200 Johnsen & Jorgensen
Sweden, 272 C. S. Lovell
,, 280 Tough & Henderson
,, 360 Christophersen, Andrews, & Co.
,, 4,890 London Paper Mills Co.
U. States, 61 Beck & Pollitzer
Norway, 150 W. E. Bott & Co.
Denmark, 8 Johnsen & Jorgensen

Zinc Oxide—
Holland, 50 pks. Prprs. Dowgate Dk.
,, 60 M. Ashby, Ld.
,, 75 J. Matton
U. States, 400 M. Ashby, Ld.
Germany, 50 Wilkinson, Heywood & Co.
Holland, 500 Soundy & Sons

Zinc Sulphate—
Sweden, £25 M. D. Co.

LIVERPOOL.

Week ending June 23rd.

Acetic Acid—
Rotterdam, 27 balloons

Aluminium—
New York, 500 bxs. T. Ashbury

Ammonium Nitrate—
Antwerp, 65 brls.

Barytes—
Rotterdam, 23 cks. 100 bgs.
Antwerp, 83 50

Bone Ash—
San Nicolas, 182 bgs.

Bone Meal—
Suez, 5 bgs.

Bones—
B. Ayres, 3 bgs.
San Nicolas, 131
Maranham, 20 H. Evans & Co.

Boracic Acid—
Leghorn, 35 cks

Borax—
Rotterdam, 1 ck.

Caoutchouc—
Havre, 2 cks. 1 sk.

Castor Oil—
Leghorn, 5 cs.

Chemicals (*otherwise undescribed*)
Rotterdam, 3 cs.
Coal Products—
Aniline Oil
New York, 25 cs.
Pitch
Amsterdam, 12 cks.
Colours—
New York, 20 brls. C. & J. G. Potter
Rotterdam, 167 cks.
Hamburg, 36
Cream of Tartar—
Bordeaux, 24 cks.
Dyestuffs—
Argols
Bordeaux, 5 cks.
Cutch
Amsterdam, 217 cs.
Extracts
New York, 84 brls.
Philadelphia, 250
Fiume, 250 Oak Extract Co., Ld.
" 748
Genoa, 50 1 ck.
Fustic
Cartagena, 375 pcs.
Trieste, qty. R. Evans
Logwood
Hamburg, 15 t.
Shumac
Palermo, 5,254 bgs. 640 bls.
Valonia
Patras, 460 bgs.
Farina—
Fiume, 500 bgs.
French Chalk—
Leghorn, 4 cs.
Glucose—
New York, 500 brls. L. Sutro & Co.
" 500
Boston, 80
Glue—
Hamburg, 105 bgs.
Naples, 100
New York, 10 brls. C. & J. G. Potter
Philadelphia, 10 Anglo-Am. Oil Co.
Boston, 2½ J. L. Duguid & Co.
Antwerp, 20 bls.
Genoa, 22 cks.
Glycerine—
Genoa, 7 dms.
Limestone—
Rouen, 2 crts. R. J. Francis & Co.
Mica—
New York, 8 cks. 20 brls.
Mineral White—
Fiume, 300 brls.
Molasses—
N. Orleans, 1,985 brls.
Nitrate—
Iquique, 13,965 bgs.
Ochre—
Rouen, 35 cks. Co-op. W'sale Society, Ld.
Paint—
Amsterdam, 32 dms.
Paraffin Scale—
New York, 540 brls. Thompson & Bedford
Philadelphia, 575 Anglo-Am. Oil Co.
New York, 300 "
Phosphate—
Ghent, 500 t.
Plumbago—
Genoa, 200 pks.
Potash—
Dunkirk, 87 dms.
Montreal, 8 brls.
Potassium Carbonate—
Stettin, 37 cks. Sachse & Klemm
Potassium Prussiate—
Boston, 29 cks.
Pumice Stone—
Teneriffe, 243 bgs. Teneriffe Coal Co.
Messina, 15 brls.
Pyrites—
Huelva, 3,487 t. Matheson & Co.
Rosin—
New York, 250 brls.
Boston, 350 Makin & Bancroft
" 250
Salt—
Hamburg, 10 cks.
Saltpetre—
Suez, 132 bgs.
Hamburg, 6 cks.
Silver Sulphide—
Vera Cruz, 3 cs.

Soap—
New York, 650 bxs. 952 cs. R. Singlehurst & Co.
Teneriffe, 1 Teneriffe Coal Co.
Boston, 10
Naples, 74
Leghorn, 50 bxs.
Soap Stock—
Galveston, 106 brls. H. Oliver
Soapstone—
Bordeaux, 190 bgs. Geo. G. Blackwell, Sons & Co.
Genoa, 400
Starch—
New York, 5 pks. Davies, Turner & Co.
Antwerp, 80 cs. J. T. Fletcher & Co.
" 80
Rotterdam, 32
Amsterdam, 40 bxs.
Stearine—
Antwerp, 26 bgs.
Sulphur—
Catania, 190 bgs.
Tallow—
New York, 60 tcs. 43 brls. 950 hds.
B. Ayres, 220
Boston, 110 6 1
Philadelphia, 180 Pittsburg P. Co.
" 400
River Plate, 550 cks.
Baltimore, 60 brls. E. Valte
" 200 tcs.
Tartaric Acid—
Rotterdam 4 cks.
Messina. 8
Waste Salt—
Hamburg, 27 cks.
Wood Pulp—
Boston, 56 crts. Lever Brs., Ld.
Montreal, 2,400 bls. A. Rice & Co.
Zinc Ashes—
New York, 14 brls. 4 hds.
Zinc Oxide—
New York, 100 brls.
Antwerp, 20

MANCHESTER.

Week ending June 25th.

Acetate of Lime—
New York, 915 bgs.
Albumen—
Hamburg, 3 cks.
Aniline Salt—
Rotterdam, 5 cks. Wilson, Sons, & Co., Ld.
Asbestos—
Rotterdam, 2 cs. Wilson, Sons, & Co., Ld.
Barium Chloride—
Hamburg, 22 cks.
Barytes—
Rotterdam, 22 cks. 400 bgs. Wilson, Sons, & Co., Ld.
Cement—
Antwerp, 1,220 bgs.
Chalk—
Rotterdam, 114 bgs. Wilson, Sons, & Co., Ld.
Colours—
Antwerp, 2 cks.
Hamburg, 14 cs.
Rotterdam, 66 34 7 bxs. 4 pks. Wilson, Sons, & Co., Ld.
Treport, 2 cs.
Cottonseed Oil—
Rotterdam, 50 brls. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 21 cks. Wilson, Sons, & Co., Ld.
Extracts
New York, 50 brls.
Logwood
Belize, 368 t. H. W. Stott & Co.
Dyestuffs (*otherwise undescribed*)
Antwerp, 1,700 bgs.
New York, 19 bls.
Farina—
Hamburg, 100 bgs.
Rotterdam, 1,000 Wilson, Sons, & Co., Ld.
Glucose—
New York, 490 brls.

Glue—
Antwerp, 50 bls.
Rotterdam, 150 bgs. Wilson, Sons, & Co., Ld.
Treport, 40 bls.
Hartshorn Salts—
Stockholm, 5 brls.
Lead Acetate—
Hamburg, 20 cks.
Limestone—
Antwerp, 3 crts. J. T. Fletcher & Co.
" 24 cs.
Methylene—
Treport, 15 cks.
Ochre—
Treport. 47 cks.
Oxalic Acid—
Hamburg. 9 cks.
Paraffin Scale—
New York, 90 brls.
Pitch—
Hamburg, 55 cks.
Phosphorus—
New York, 40 cs.
Potash—
Hamburg, 10 kgs. 20 cks.
Rotterdam, 9 dms. Wilson, Sons, & Co., Ld.
Red Lead—
Rotterdam, 25 cks. Wilson, Sons, & Co., Ld.
Rosin—
Brunswick, 5,463 brls. Smith & Forest
Rotterdam, 1 ck. Wilson, Sons, & Co., Ld.
Saltpetre—
Hamburg, 10 cks.
Silicate—
Hamburg, 50 bgs.
Sodium Nitrate—
Rotterdam, 16 cks. Wilson, Sons, & Co., Ld
Starch—
Antwerp, 658 cs.
Hamburg, 236
New York, 3,770 bgs.
Rotterdam, 320 cs. Wilson, Sons, & Co., Ld.
Tallow—
Rotterdam, 100 tcs. Wilson, Sons, & Co., Ld.
New York, 50 hds.
Tartaric Acid—
Rotterdam, 4 cks. 30 kgs.
Tin Perchloride—
Antwerp, 4 cks.
Varnish—
Rotterdam, 3 cks. Wilson, Sons, & Co., Ld.
Waste Salt—
Hamburg, 1,000 bgs. and qty.
Wood Pulp—
Christiania, 2,310 bls. W. H. Ingram
Drammen, 50¾ bdls. "
Gefle, 1,000 bls.
Hamburg, 4
Rotterdam, 508 reels Wilson, Sons. & Co., Ld.
Skien, 960 bls. W. H. Ingram
Zinc Oxide—
New York, 100 brls.
Rotterdam, 90 Wilson, Sons, & Co., Ld.
Zinc White—
Rotterdam, 5 cks. Wilson, Sons, & Co., Ld.

GLASGOW.

Week ending June 30th.

Alkali—
Rotterdam, 121 bgs. J. Rankine & Son
Alumina Sulphate—
Rotterdam, 78 cks. 200 bgs. J. Rankine & Son
Asbestos—
Montreal, 500 bgs.
Barytes—
Rotterdam, 93 pks. 21 cks. J. Rankine & Son
Hamburg, 20 bgs.
Barium Sulphate—
Antwerp, 76 cks. 550 bgs.

Castor Oil—
Antwerp, qty.
Colours—
Rotterdam, 44 pks. J. Rankine & Son
Dyestuffs—
Alizarine
Rotterdam, 13 cks. J. Rankine
1 bx. 72 brls. & Son
Aniline
Rotterdam, 27 brls. 13 bxs.
Aniline Colours
Hamburg, 13 cks. 4 cs.
Amsterdam, 1 1
Extracts
Fiume, 254 brls.
Indigo
Rotterdam, 3 brls. J. Rankine & Son
Madder
Rotterdam, 1 ck. J. Rankine & Son
French Chalk—
Fiume, 50 bgs.
Gelatine—
Hamburg, 27 cs.
Glucose—
New York, 2,943 brls.
Glue—
Rotterdam, 105 bgs. J. Rankine & Son
New York, 95 brls.
Guano—
Hammerfest, 282 sks.
Infusorial Earth—
Hamburg, 199 bgs.
Methyl Alcohol—
Antwerp, 3 dms.
Ochre—
Rotterdam, 6 cks. J. Rankine & Son
Painters' Colours—
Antwerp, 4 cks.
Phosphates—
Antwerp, 1,020 bgs.
Potash—
Hamburg, 31 dms.
Rotterdam, 64 cks. J. Rankine & Son
Montreal, 14 brls.
Pyrites—
Huelva, 3,749 t. Tharsis Sulphur & Copper Co. Ld.
Rosin—
New York, 750 brls.
Saltpetre—
Hamburg, 40 kgs.
Soap—
New York, 50 cs 2,700 bxs. 360 brls.
Fiume, 27 G. & J. Boyd
" 11
Starch—
Baltimore, 900 bgs.
New York, 100 1,649 sks. 1,100 bxs.
Antwerp, 10 596 cs.
Fiume, 520
Rotterdam, 15 J. Rankine & Son
Tallow—
Baltimore, 85 tcs.
New York, 25
Tar Waste—
Rotterdam, 4 cks.
Varnish—
New York, 31 brls.
Waste Salt—
Hamburg, 100 bgs.
White Lead—
Rotterdam, 80 cks. J. Rankine
70 kgs. & Son
Wood Pulp—
Boston, 180 bls.
Quebec, 3,800
Christiania, 450 10 cs.
New York, 20 rolls.
Zinc Oxide—
Rotterdam, 25 cks. J. Rankine & Son
New York, 250 brls.
Zinc White—
Rotterdam, 8 cks. J. Rankine
25 pks. & Son

HULL.

Week ending June 25th.

Acids—
Barletta, 130 cks. Wilson, Sons, & Co., Ld.

Aluminium—
New York, 4 bxs. Wilson, Sons, & Co., Ld.

Arsenic—
Hamburg, 5 cks. Wilson, Sons, & Co., Ld.

Barytes—
Antwerp, 18 cks. Bailey & Leetham, Ld.
" 55 bgs. "
" 103 cks. H. F. Pudsey
Bremen, 23 S. Tudor & Co., Ld.
" 39
Rotterdam, 111 Hutchinson & Son
" 23 W. & C. L. Ringrose

Castor Oil—
Trieste, 17 cs. Wilson, Sons, & Co., Ld.
Venice, 6 "

Ceresin Wax—
Amsterdam, 2 cs. Hutchinson & Son

Chemicals *(otherwise unaescribed)*
Antwerp, 109 pks. Wilson, Sons, & Co., Ld.
Danzig, 16 cks.
Dunkirk, { 25 / 99 pks. "

Colours—
Amsterdam, 1 ck. W. & C. L. Ringrose
Antwerp, 26 pks. Wilson,
3 cs. Sons, & Co., Ld.
Dunkirk, { 8 pks. / 2 cks. "
Rotterdam, 10 Hutchinson
120 pks. & Son
" 4 cs. W. & C. L. Ringrose
Stettin, 30 cks. Wilson, Sons, & Co., Ld.

Cottonseed Oil—
New York, 360 brls.

Dyestuffs—
Alizarine
Rotterdam, 28 brls. Hutchinson & Son
Argols
Bordeaux, 52 cks. Rawson & Robinson
Extracts
Dunkirk, 1 ck. Wilson, Sons, & Co., Ld.
Hamburg, 5 brls. "
New York, 400 "
Gambier
Antwerp, 52 bgs. Wilson, Sons, & Co., Ld.
Shumac
Palermo, 934 bgs. Wilson, Sons, & Co., Ld.
" 500
Trieste, 20 "
Valonia
Trieste, 388 bgs. Wilson, Sons, & Co., Ld.

Farina—
Hamburg, 100 bgs. Wilson, Sons, & Co., Ld.
Stettin, 400 "

Glucose—
New York, 50 brls. Wilson, Sons, & Co., Ld.
2,335
" 1,250 bgs.
Rotterdam, 10 cks. Hutchinson & Son
Stettin, 25 Wilson, Sons, & Co., Ld.

Glue—
Christiania, 100 bgs. Wilson Sons, & Co., Ld.
Dunkirk, 24 cks. "
Fiume, 100 bgs. "
Hamburg, 60 "
Rouen, 8 cks. Rawson & Robinson
Trieste, 8 Wilson, Sons, & Co., Ld.

Lime—
New York, 823 bgs. Wilson, Sons, & Co., Ld.

Limestone—
Antwerp, 1 crt. Wilson, Sons, & Co., Ld.

Litharge—
Rotterdam, 16 cks. Hutchinson & Son

Lithopone—
Rotterdam, 40 cks. Hutchinson & Son

Mica—
Bordeaux, 30 bgs. Rawson & Robinson

Minium—
Rotterdam, 5 cks. Wilson, Sons, & Co., Ld.

Nickel Salt—
Rotterdam, 1 ck. W. & C. L. Ringrose

Nitrate—
Hamburg, 5 cks. Wilson, Sons, & Co., Ld.

Ochre—
Bremen, 4 cks. Storry, Smithson, & Co.
Rouen, 33 Rawson & Robinson

Paint—
Amsterdam, 1 dm. Hutchinson & Son
New York, 1 kg. Wilson, Sons, & Co., Ld.

Phosphate—
Dunkirk, 100 t.
Ghent, 200 Wilson, Sons, & Co., Ld

Pitch—
Amsterdam, 9 cks. Hutchinson & Son
Copenhagen, 50 brls. Wilson, Sons, & Co., Ld.

Plumbago—
Hamburg, 115 cks. Wilson, Sons, & Co., Ld

Potash—
Hamburg, 21 dms. Wilson, Sons, & Co., Ld.

Pyrites—
Huelva, 600 t.

Saltpetre—
Antwerp, 135 bgs Wilson, Sons, & Co., Ld
Hamburg, 12 "

Soap—
Bari, 54 cs. Wilson, Sons, & Co., Ld.
" 43
Rotterdam, 50 "
Trieste, 2 "

Soda—
Antwerp, 100 bgs. Bailey & Leetham, Ld.
" 100 cks. Wilson, Sons, & Co., Ld.
Ghent, 100 bgs. "
Gothenburg, 4 cks. "
Hamburg, 6 Bailey & Leetham, Ld.

Sodium Acetate—
Rouen, 12 cks. Rawson & Robinson

Starch—
Antwerp, 260 cs. Wilson, Sons, & Co. Ld.
Bremen, 1,978 Veltmann & Co.
Ghent, 176 Wilson, Sons, & Co., Ld.
New York, 600 bgs.

Stearine—
Antwerp, 57 pks Wilson, Sons, & Co., Ld
New York, 25 tcs. "

Sulphur—
Catania, 417 pks. Wilson, Sons, & Co., Ld.
409
" 50 t.

Tallow—
Dunkirk, 227 cks. Wilson, Sons & Co., Ld.
New York, 138 "
Rotterdam, 5 tcs. Hutchinson & Son

Tar—
Amsterdam, 9 cks Hutchinson & Son

Tartaric Acid—
Rotterdam, 8 cks. W. & C. L. Ringrose

Tin Oxide—
Amsterdam, 1 ck. W. & C. L. Ringrose

Turpentine—
Bordeaux, 70 cks. Rawson & Robinson
Liban, 15 brls. Wilson, Sons, & Co., Ld.
" 53 Helmsing & Son
" 52

Ultramarine—
Amsterdam, 2 cs. Hutchinson & Son
Rotterdam, 3 cks. W. & C. L. Ringrose

Varnish—
Dunkirk, 1 cs. Wilson, Sons, & Co., Ld.

White Lead—
Amsterdam, 12 cks. W. & C. L. Ringrose
" 22 Hutchinson & Son
Ghent, 16 brls. Wilson, Sons, & Co., Ld
Rotterdam, 8 "
" 52 Hutchinson & Son

Wood Pulp—
Abo, 168 bls J. Good & Sons
Christiania, 2 530 Wilson, Sons, & Co., Ld.
Christiansand, 464 "
Drontheim, 2,028 "
Gothenburg, { 175 / 52 pks. "
" 40 bls. W. Shipstone & Co.
Hango, 41 pks. J. Good & Sons

Zinc Oxide—
Antwerp, 4 cks. Bailey & Leetham, Ld.

Zinc White—
Amsterdam, 50 cks. W. & C. L. Ringrose
" 40 Hutchinson & Son

TYNE.

Week ending June 25th.

Acetic Acid—
Rotterdam, 9 blns. Tyne S. S. Co.

Alum Earth—
Hamburg, 17 cks. Tyne S. S. Co.

Barytes—
Hamburg, 50 bgs Tyne S. S. Co.
Rotterdam, { 200 / 42 cks. "

Colours—
Antwerp, 3 cks. Tyne S. S. Co.

Dyestuffs *(otherwise unaescribed)*
Antwerp, 650 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 7 crts. Tyne S. S. Co.

Manganese Ore—
Hamburg, 10 cs Tyne S. S. Co.

Ochre—
Rotterdam, 2 cks. Tyne S. S. Co.

Painters' Colours—
Hamburg, 15 kgs. Tyne S. S. Co.

Phosphates—
Antwerp, 255 t. Langdale's Chemical M. Co.

Salt—
Hamburg, 253 bgs. Tyne S. S. Co.

Starch—
Antwerp, 100 cs. Tyne S. S. Co.
Rotterdam, 76 "

Stearine—
Drontheim, 1 brl, P. H. Matthiessen & Co.

Varnish—
Antwerp, 4 kgs. Tyne S. S. Co.

Wood Pulp—
Christiania, 1,082 bls.

Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending June 22nd

Alizarine—
Rotterdam, 42 cks.

Aniline—
Rotterdam, 337 cks. 68 cs.

Barytes—
Antwerp, { 51 bgs. / 41 cks.

Caoutchouc—
Boulogne, 16 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 6 cs.

Colours—
Hamburg, 20 cks. 16 cs.

Dyestuffs *(otherwise unaescribed)*
Antwerp, 163 bgs.
Boulogne, 215 cks.
Bruges, 200 bgs.

Farina—
Delfszyhl, 500 bgs.
Hamburg, 400

Glue—
Boulogne, 1 ck. 2 bls.
Hamburg, { 1 / 20 bgs.
Rotterdam, 40

Glycerine—
Hamburg, 4 dms.

Logwood—
Belize, 555 t.

Manure—
Calais, 1,530 bgs.

Ochre—
Dunkirk, 21 cks.

Pitch—
Antwerp, 300 t.

Potash—
Antwerp, 2 cks.
Calais, 8 dms.
Dunkirk, 17 30
Rotterdam, 12

Pyrites—
Huelva, 2,891 t.

Saltpetre—
Rotterdam, 100 bgs.

Size—
Hamburg, 10 cks.

Sodium Nitrate—
Hamburg, 6 cks.

Sodium Sulphate—
Rotterdam, 13 dms.

Starch—
Ghent, 128 bxs.

Tartar—
Rotterdam. 9 cks.

Waste Salt—
Hamburg, 140 t.

Wood Pulp—
Skien, 2,415 bls.

GRIMSBY.

Week ending June 25th.

Caoutchouc—
Antwerp, 1 pk.
Hamburg, 2 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 20 cks. 1 cs.

Colours—
Antwerp, 138 pks.
Hamburg, 62 cks. 9 cs. 32
Rotterdam 4

Farina—
Hamburg, 100 bgs.

EXPORTS OF CHEMICAL PRODUCTS
OF THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 29th.

Acids—
Sydney, 5 cs. £17
E. London, 75 155

Alkali—
E. London, 1 t. 1 c. £24
Auckland, 4 1 25
Antwerp, 5 2 54

Ammonia—
Cologne, 4 cks. 30 dms. £233
Durban, 19 c. 15

Ammonium Carbonate—
St. Petersburg, 10 t. £260
Melbourne, 20 cs. 30

Ammonium Sulphate—
Dunkirk, 19 t. 12 c. £183
Demerara, 104 15 1,050
Bremen, 50 400
Hamburg, 52 14 460
Durban, 15 142

Amorphous Phosphorus—
Rio de Janeiro, 2 cs. £28

Basic Slag—
Melbourne, 15 t. £38
Bleaching Powder—
Durban, 15 c. £8
Bone Ash—
Mauritius, 100 t. £340
Boracic Acid—
Wellington, 1 t. £25
Brisbane, 20 kgs. 25
Adelaide, 20 25
Borax—
Durban, 23 cks. £35
Townsville, 3 t. 10 c. 56
Dusseldorf, 10 10
Mannheim, 1 2 18
Wellington, 15 14
Adelaide, 20 kgs. 23
Sydney, 35 pks. 45
Carbonic Acid Gas—
New York, 28 cs. £14
Caustic Potash—
Sydney, 1 t. 1 c. £15
Caustic Soda—
Townsville, 4 t. 8 c. £34
Lyttelton, 13 16
Brisbane, 22 8 160
Durban, 1 19 20
Wellington, 7 7
Bahia, 13 7 110
Napier, 5 37
Wanganui, 5 4 38
E. London, 4 19 42
Chemicals *(otherwise undescribed)*
Genoa, 10 kgs. £58
Mossel Bay, 11 cs. 10
Gothenburg, 8 cks. 95
Boulogne, 1 13
Barbadoes, 25 dms. 10
Antigua, 250 bgs. 190
Dunkirk, 38 510
Amsterdam, 12 kgs. 69
Brussels, 5 4 hds. 41
Bombay, 12 cs. 31
Pt. Chalmers, 4 pks. 27
Singapore, 3 16
Montreal, 25 196
Brisbane, 262 362
Karachi, 35 22
Durban, 10 51
Montreal, 16 dms. 61 116
Rouen, 2 cks. 60
Cape Town, 31 cs. 11 51
Sydney, 13 78 319
Antwerp, 3 24
Melbourne, 5 37 134
Hamburg, 15 kgs. 5 17 163
Rotterdam, 10 57
Adelaide, 3 brls. 10 85
Citric Acid—
Limon, 1 c. £6
Wellington, 3 18
Cape Town, 1 8
Calcutta, 2 cs. 13
Sydney, 1 t. 1 110
New York, 1 10 180
Copenhagen, 10 58
Mossel Bay, 1 ck. 7
Delagoa Bay, 3 18
Melbourne, 65 kgs. 340
Coal Products—
Alizarine
Lisbon, 2 cks. £26
Aniline
Melbourne, 1 cs. £30
Anthracene
Gothenburg, 250 brls. £191
Rotterdam, 851 2,793
Benzine
Brisbane, 11 cs. £12
Benzol
Treport, 74 cks. £231
Boulogne, 97 276
Carbolic Acid
Napier, 25 dms. £22
Sandakan, 1 ck. 9
Sydney, 10 21
Marseilles, 49 148
Boulogne, 75 147
Alexandria, 2 brls. 12
E. London, 1 cs. 8
Creosote
Mobile, 5,083 cks. £2,921
New York, 1,550 1,121
Dieppe, 23,500 galls. 123
Naphtha
Christchurch, 6 cs. £8
Naphthaline
Calcutta, 5 cks. £9
Pitch
Alexandria, 400 brls. 152
Hochfeld, 125 t. 171
Bombay, 35 14
Fremantle, 40 kgs. 10
Sydney, { 5 cks. 6 pks. 25 4 crts. 51
Halifax, 310 59
Hamburg, 50 120
Boston, 500 258
Varna, 100 28
Antwerp, 751 t. 895
Tar
E. London, 250 dms. £7
Gothenburg, 100 —
Delagoa Bay, 150 22
Bombay, 30 brls. 50 brls. 59
Fremantle, 95 19
Sydney, 250 25 67
Durban, 130 13
Pt. Elizabeth, 400 11
Rotterdam, 49 cks. 141
St. Petersburg, 4,000 2,600
Calcutta, 10 8
Toluol
Rotterdam, 58 cks. £393
Copper Sulphate—
Treport, 4 t. 19 c. £75
Odessa, 10 170
Paris, 41 12 670
Varna, 13 10
Durban, 10 9
Antwerp, 20 320
Amsterdam, 4 18 80
Cream of Tartar—
Napier, 5 c. £18
Wellington, 1 t. 8 102
Auckland, 10 41
Hobart, 10 39
Delagoa Bay, 2 10
Disinfectants—
Pt. Elizabeth, 10 cs. £20
Melbourne, 30 10 dms. 96
Durban, 55 pks. 26
Calcutta, 21 10 450 97
Montreal, 6 14
Lyttelton, 90 cks. 25
Glycerine—
Rotterdam, 84 t. 15 c. £2,040
Manure—
Dunedin, 235 t. £820
E. London, 95 78
Mauritius, 45 62
Malaga, 51 375
Durban, 10 47
Nitric Acid—
Townsville, 20 pks. £22
Oxalic Acid—
Melbourne, 5 t. 2 c. £165
Phosphate—
Bundaberg, 2 t. 2 c. £35
Phosphoric Acid—
Mauritius, 25 t. £360
Potash—
Cape Town, 2 c. £7
Fremantle, 6 28
Melbourne, 10 36
Brussels, 5 37
Potassium Chlorate—
Melbourne, 28 kgs. £45
Potassium Cyanide—
Boston, 3 t. £363
Auckland, 3 315
Delagoa Bay, 10 14 c. 850
Melbourne, 7 5 575
Sydney, 3 12 290
Brisbane, 2 213
Townsville, 1 117
Pt. Elizabeth, 6 10 62
Potassium Prussiate—
Ghent, 2 cks. £34
Potassium Sulphate—
Durban, 4 t. 10 c. £48
Salammoniac—
Melbourne, 1 t. 3 c. £30
Saltpetre—
Rio de Janeiro, 16 c. £17
Lisbon, 7 t. 6 138
Wellington, 1 15 41
Sydney, 2 13 57
Oporto, 6 15 197 8
Bahia, 5 11 50 brls. 17 4
Pt. Elizabeth, 1 2 24
Sheep Dip—
Wellington, 4 cks. £11
Calcutta, 815 dms. 300 pks. 110
Sydney, 350 20 5 cs. 257
Hobart, 150 263
Gisborne, 70 123
Fremantle, 200 350
Launceston, 150 258
B. Ayres, 2,760 6,375
Montreal, 25 6 14
Melbourne, 4 5
Jamaica, 22 12
Pt. Elizabeth, 6 t. 4 c. 980 1,472
Soda—
Cape Town, 5 t. 14 c. £18
Pt. Elizabeth, 3 9
Sodium Bicarbonate—
Trinidad, 1 t. £7
Smyrna, 2 c. 5
Sodium Carbonate—
Durban, 12 kgs. £7
Sodium Silicate—
Napier, 8 t. £50
Sodium Sulphate—
Ghent, 50 t. £75
Sodium Sulphite—
Montreal, 1 t. £132
Sulphur—
Cape Town, 100 cks. £81
E. London, 25 18
Sulphuric Acid—
Sydney, 10 cs. £18
E. London, 75 53
Cape Town, 20 42
Superphosphate—
Bluff, 100 t. £300
Timaru, 200 600
Demerara, 7 18
Perth, 50 141
Tartaric Acid—
Brisbane, 5 c. £23
Melbourne, 1 t. 113
Rouen, 2 210
Fremantle, 4 23
Wellington, 4 21
Sydney, 30 kgs. 180

LIVERPOOL.

Week ending June 29th.

Acetic Acid—
Copenhagen, 3 t. £60
Santos, 17 c 12
Alkali—
Odessa, 15 t. 12 c. £62
Calcutta, 22 19 95
Rotterdam, 4 14 2 q. 20
Montreal, 10 1 40
B. Ayres, 21 18 87
Barranquilla, 1 18 3 8
Piræus, 17 16 2 72
Galatz, 10 45
Oporto, 5 13 23
Malta, 5 7 3 23
Alum—
San Francisco, 20 t. £80
St. John's, 3 17 c. 3 q. 21
Constantinople, 2 12 12
Sydney, 12 8 2 56
Santos, 12 2 7
Alexandretta, 1 5
Galatz, 3 1 15
Ibrail, 1 5
Penang, 1 8 —
Singapore, 1 10 18
Callao, 7 7 2 34
Lisbon, 10 16 2 50
Pernambuco, 5 24
Rio de Janeiro, 2 3 1 11
Montreal, 7 6 36
Ammonia—
B. Ayres, 18 c. £27
Ammonium Carbonate—
Genoa, 25 kgs. £30
Venice, 25 30
Bordeaux. 1 t. 30
Copenhagen, 10 c. 9
Valparaiso, 1 5 44
Corunna, 10 2 q 14
Montreal, 10 2 14
Singapore, 1 28
Hamburg, 1 29
Ammonium Chloride—
Alexandria, 10 brls. £33
Piræus, 3 c. 5
Smyrna, 12 20
Genoa, 4 cks. 35
Naples, 10 16
Colombo, 2 2 q. 8
Ammonium Muriate—
Rouen, 4 t. £60
Barcelona, 1 8 c. 26
B. Ayres, 1 23
Philadelphia, 6 5 2 q. 110
Ammonium Sulphate—
Las Palmas, 5 t. 4 c. £50
New York, 25 10 236
Demerara, 25 230
Philadelphia, 50 3 2 q. 480
Baltimore 100 10 940
Barcelona, 10 90
Anhydrous Ammonia—
San Nicolas, 5 cylds. £10
Rangoon, 1 c. 8
Basic Slag—
Granville, 300 t. £195
Bleaching Powder—
Adelaide, 7 dms.
Antwerp, 100 bxs.
Bombay, 8 cks.
Boston, 283
Milwaukee, 108
Montreal, 51
Philadelphia, 195
Naples, 42
Rouen, 31
Rotterdam, 34
San Sebastian, 58
Seville, 40
Valparaiso, 10 cs.
Boracic Acid—
Rotterdam, 1 t. £25
Borate of Lime—
Hamburg, 1 t. 14 c. £13
Borax—
Rotterdam, 5 t. 3 c. £78
Wellington, N.Z., 5 80
Antwerp, 4 10 3 q. 66
Alexandria, 1 1 3 16
N. Orleans, 5 4
Valparaiso, 3 2 4
Bombay, 10 7
Adelaide, 11 7
Montreal, 20 19 294
Brisbane, 2 1 3 40
Calcium Chloride—
B. Ayres, 10 t. 1 c. £24
Sydney, 10 21
Odessa, 20 4 40
Yokohama, 60 6 125
Rouen, 10 1 22
Gothenburg, 3 7
Malta, 5 4 12
Carbolic Acid—
Fiume, 10 cks. £33
Rouen, 7 t. 412
Hamburg, 1 1 c. 67
Caustic Soda—
Adelaide, 53 dms. 135 kgs. 10 cs.
Alexandria, 100
Antofagasta, 10
Amsterdam, 17
Barcelona, 200
Bombay, 20
Callao, 10
Cape Town, 14
Catania, 20
Corinto, 16
Dunedin, 35
Galatz, 18
Fairwater, 35
Genoa, 96
Hamburg, 50
Hiogo, 377
Ibrail, 70
Leghorn, 36
Naples, 105
N. Orleans, 80
Pacasmayo, 20
Piræus, 39
Toronto, 25
Antwerp, 14
Boston, 50
B. Ayres, 100
Calcutta, 14
Lisbon, 30
Madras, 4
Melbourne, 30
Newcastle, 28
New York, 100
Rangoon, 43
Salonica, 18
San Francisco, 150
San Sebastian, 30
Seville, 149
Shanghai, 45
Stettin, 135 26 brls.
Tampico, 357
Vera Cruz, 25
Chemicals *(otherwise undescribed)*
Stettin, 3 t. £96
Genoa, 2 3 c. 3 q. 31
Calcutta, 10 10 2 34
Sydney, 1 2 25
Yokohama, 2 49
Pisagua, 4 2 10
Odessa, 2 15 71
Philadelphia, 26 2 676
B. Ayres, 2 cs. 4
Boston, 271 tcs. 220
China Clay—
Barcelona, 50 bgs.
Bombay, 208 cks.
Boston, 1,498
B. Ayres, 20 t.
Calcutta, 160
Montreal, 520
New York, 150
Philadelphia, 1,000
Rio de Janeiro, 80
Toronto, 30

Coal Products—
Alizarine
Lisbon, 2 cks.
Aniline
Barcelona, 45 cks.
Bombay, 2 cs.
Boston, 6 kgs.
Aniline Oil
Genoa, 10 dms.
Rouen, 3
Aniline Salts
Boston, 80 cs.
Piræus, 10 brls.
Creosote Oil
Bordeaux, 500 cks.
Creosote Salts
Antwerp, 25 t. £35
Pitch
Cette, 920 t.
Rouen, 9 pks.
Antwerp, 73 112 c.
Tar
Demerara, 30 brls.
Sierra Leone, 1
Valparaiso, 20 dms.

Copperas –
Constantinople, 2 t. 12 c. £6
M. Video, 4 15 1 q. 10

Copper Sulphate—
Talcahuano, 13 t. 8 c. £215
Ghent, 16 3 261
Varna, 2 10 40
Messina, 3 1 3 q. 50
Bordeaux, 66 13 1 1,051
Calcutta, 5 80
Genoa, 2 32
Galatz, 6 2 97
Rouen, 9 19 163
Hamburg, 9 12 156
Venice, 4 9 72
Braila, 13 218
Aleppo, 1 4 18
Nantes, 14 18 2 239

Corrosive Sublimate—
Alexandretta, 1 c. £13

Cream of Tartar—
Savanilla, 2 c. 3 q. £12

Disinfectants—
Saltpond, 13 c. 3 q. £12
Rangoon, 2 cks. 1 8
Montreal, 12 19
Calcutta, 4 t. 11 2 q. 81
Bombay, 10 5

Dried Blood—
Mauritius, 20 t. £137
Dunkirk, 49 10 c. 322

Epsom Salts—
Tampico, 20 kgs.

Glycerine—
Hamburg, 23 t. 1 c. 3 q. £369
Genoa. 15 1 31
Rotterdam, 20 570
Yokohama, 2 5 92
Constantinople, 6 18
Salonica, 13 3 41

Lead Acetate—
Calcutta, 1 t. 15 c. £51

Magnesia—
Para, 4 cs.
Philadelphia, 10

Magnesium Chloride –
Rouen, 5 t. 3 c. £2

Ochre—
Odessa, 30 cks.
Piræus, 9 brls.
Talcahuano, 30
Calcutta, 50 bgs.

Oxalic Acid—
Boston, 14 t. 16 c. £405

Paint—
Amsterdam, 3 brls.
Antwerp, 29 kgs. 1 dm
Belize, 140 59 cks.
Calcutta, 12 61
Constantinople, 58
Demerara, 54
Iquitos, 35
Gibraltar, 59 pks.
Magog, 2
Lagos, 7
Old Calabar. 10 dms.
St. John's, Nfd., 303 1
Para, 14
Penang, 9
Sanchez, 2
Saltpond, 40
Smyrna, 145
Talcahuano, 16 1 cs. 60
Tripoli, 72 10 dms
Sulina, 4
Tampico, 4
Valparaiso, 50
Yaramaguas, 3 brls.

Painter's Colours—
Alexandria, 150 kgs. 1 cs.
Benin, 120
Ceara, 20 pks.
Coquimbo, 40
Madras, 10
Hamburg, 10
Lisbon, 6 brls.
Piræus, 59
New York, 2 bxs.
Payta, 2 frks.
Pernambuco, 25 kgs. 5 cks.
Philadelphia, 11
Pisagua, 30 frks. 76 1 brl.
St. John's, Nfld., 88 kgs. 1 bx. 11
Valparaiso, 7 27 cs.
Tal.ahuano, 5

Paraffin Wax—
Constantinople, 10 cs.
Genoa, 30 pks.
Odessa, 50 bgs.

Phosphorus—
B. Ayres, 10 c. £90
Hiogo, 5 t. 5 1,050
Rio de Janeiro, 5 70
Tampico, 3 27
Trinidad, 3 28

Potash—
Corunna, 5 c. 3 q. £7

Potassium Bichromate—
Rouen, 10 t. 1 c. £352

Potassium Carbonate—
New York, 18 t. £315

Potassium Chlorate—
Copenhagen, 2 t. 10 c. £82
Gothenburg, 10 300
Gutujewski, 26 724
Hiogo, 52 10 1,623
Konigsberg, 15 23
Montreal, 3 15 103
Moscow, 5 160
New York, 50 1,661
Odessa. 1 30
Philadelphia, 5 160
Rotterdam, 10 15
St. Petersburg, 10 15
Yokohama, 10 320

Potassium Prussiate—
Boca, 2 c. £6
Ghent, 4 cks. 51
Montreal, 5 16

Rosin Oil –
Oporto, 10 brls.

Salt—
Akassa, 60 t.
Algoa Bay, 100 sks.
Amsterdam, 170 49 cs.
Antwerp, 50
Bonny, 16 1 c.
Boston, 270
Brass, 10
B. Ayres, { 14 350 cs. 150 brls.
Buenaventura, 70
Burutu, 6.2
Calcutta, 2,879
Callao, 50
C. C. Castle, 61 10 c.
Cape Town, 150
Delagoa Bay, 15
E. London, 9
Fredricia, 703
Halifax, 200
Harlingen, 480
Honolulu, 10
Jersey, 10 1 cs.
Kingston, 30
Lagos. 300
Montreal, 958
Mendoza, 250
Mossel Bay, 30
N. Orleans, 100
Newcastle, 100
New Plymouth, 60
New York, 500 bgs. 600 sks.
Old Calabar, 3,500
Quebec, 203 t. 20 2,250
Rio de Janeiro, 50
Rio Del Rey, 1,120
Rosario, { 100 150 brls.
Rotterdam, 120
Sandy Point, 20 cs.
San Francisco, 23,241
Sapeli, 300 bgs.
Sydney, { 2,015 293 t.
Terneuzen, 100
Townsville, 284 bgs.
Valparaiso, 200 t.
Wellington. 800

Salt Cake—
Baltimore, 25 t. 1 c. £37
Philadelphia, 50 12 81
Terneuzen, 109 130

Sheep Dip—
B. Ayres, 77 t. 1 c. £1,667
Sandy Point, 4 11 2 q. 136

Soap—
Addah, 20 bxs.
Alexandria, { 102 2 cs. 5 kgs.
Akassa, 230 bxs.
Antwerp, 174 250
Barbadoes, 112 5
Bombay, 480 66
Boston, 10 pks.
B. Ayres, 21
Calcutta, 250
Callao, 1
Cape Coast, 162
Christiania, 60
Cape Town, 2,041
Colombo, 2
Constantinople, 17
Curacao, 100
Dominica, 20
Durban, 380
E. London, 2,320
Galatz, 7
Gibraltar, 100
Grenada, 50
Iquitos, 100
Karachi, 240 8
Kingston, 1,320
Lagos, 150
Las Palmas, 100
Leghorn, 1
Madras, 35
Malta, 71
Manaos, 640
Mannheim, 230
Montserrat, 40
Mossel Bay, 50
Naples, 1
New York, 163
N. Orleans, 200
Para, 950 200 bdls.
Penang, 30
Principe, 40
Rangoon, 420
Rio de Janeiro, 3
Potterdam, 400
Rouen, 11
St. John's, N'fd., 250 411
St Lucia 50
Shanghai, 7,483
Samarang. 10
Sandy Point, 23
Singapore, 2,600 200
Sourabaya, 3 pks.
Surinam, 50
Sydney, 16 tnks.
Tangiers, 90
Tientsin, 100
Toronto, 500
Trinidad, 3,450
Valparaiso, { 675 1 100 kgs.
Warri, 500 bxs.
Zurich, 260

Soda—
Cape Town, 14 brls.
Corfu, 20
Halifax, 25 kgs.
Melbourne, 8 cks.
Montreal, 30

Soda Ash—
Adelaide, 67 cks.
Baltimore, 31 tcs.
Boston, 33
B. Ayres, 50
Calcutta, 28 brls.
Ceara, 10
Copenhagen, 100 pks.
Corfu, 50
Genoa, 201 bgs.
Halifax, 8
Hamburg, 33
Hespler, 100
Hiogo, 274
Kobe, 165
Lagos, 25
Leghorn, 100
M. Video, 50
Montreal, 150
Philadelphia. 200 83 tcs.
Puerto Cabello, 15
Rio de Janeiro, 200 brls. { 8
Santos, 30
Sydney, 391

Soda Crystals—
B. Ayres, 30 brls.
New York, 56

Sodium Bicarbonate—
Adelaide, 300 kgs.
Alexandria, 32
Algoa Bay, 40
Amsterdam, 40
Antwerp,
Barcelona, 55 2 cks.
Bombay, 500 40
B. Ayres, 10
Brisbane, 130 2
Calcutta, 6
Cape Town, 20
Galatz, 35 dms.
Genoa, 236 pks.
Halifax, 48
Hamilton, 100 20 cks.
Havre, 10
Johannesburg, 50
Karachi, 20 4
Lisbon, 30
Montreal, 15
Malta, 35 pks.
Naples, 50
Odessa, 110
Rotterdam, 20
Rouen, 44
Stettin, 20
St. John s, N.B., 20
St. John's, N'fd., 20
Salonica, 40
Toronto, 50
Vaoua, 20
Vera Cruz, 70

Sodium Chlorate—
Hamburg, 4 cks.
Montreal, 100 kgs.
Rotterdam, 10

Sodium Hyposulphite—
Callao, 40 kgs.
San Francisco, 500

Stearine—
Tunis, 18 brls.

Sulphur—
Baltimore, 50 t. 2 c. £213
Boston, 400 4 1,709
Ghent, 10 46
Montreal, 273 5 1,244
Natal, 6 28
St. John's, N.B., 2 8 16

Superphosphates—
Gd. Canary, 25 t. £125
Las Palmas, 20 70
Nantes, 48 16 c. 1 q. 75
Riga, 2,200 3,796

Varnish—
Alexandria, 2 cs.
Bilbao, 2 cks.
Lisbon, 7
M. Video, 1
Matadi, 2
Penang, 2
Piræus, 6
Valparaiso, 1
Varna, 1

Vermilion—
New York, 5 cs.

White Lead—
Malta, 40 kgs.
Piræus, 40

Zinc Chloride—
Bombay, 7 t. 5 c. £86

MANCHESTER.

Week ending June 29th.

Alum—
Bussorah, 50 brls.
Mohammerah, 5

Ammonium Sulphate—
France, 209 bgs.

Aniline Colours—
Germany, 5 kgs.
Holland, 1

Aniline Oil—
Belgium, 1 brl. 8 dms.
Holland, 1
Germany, 1

Boracic Acid—
Germany, 6 cks.

Chemicals (*otherwise undescribed*)
Alexandria, 50 brls.
Antwerp, 15 kgs. 5
Rotterdam, { 5 2 cks. 3 cs.

Copperas—
Alexandria, 50 cks.
Bussorah. 70 brls.

Gamma Acid—
Germany, 2 cks.

Glue—
Holland, 18 cks.

Glycerine—
Belgium, 1 dm.

Linseed Oil—
Alexandria 10 rls.

Logwood Dust—
Alexandria, 67 bgs.
Logwood Extract—
Norway, 1 ck.
Ochre—
Beyrout, 5 brls.
Paint—
Beyrout, 19 kgs.
Paranitraniline—
Germany, 13 kgs.
Pitch—
Belgium, 109 t. 2 c.
Marseilles, 1,425 8
Soap—
Alexandria, 100 bxs.
Holland, 10 cs.
Soda Ash—
Tunis, 20 bgs.
Soda Crystals—
Beyrout, 2 kgs.
Sodium—
Germany, 30 cks.
Sodium Bicarbonate—
Alexandria, 65 kgs.
Spirits of Turpentine—
Beyrout, 2 brls.
Sulphuric Acid—
Ispahan, 8 cs.
Tallow—
Tunis, 2 bxs.
Tar Oil—
Belgium, 10 brls.
Toluol—
Germany, 29 dms.
Venetian Red—
Alexandria, 87 brls.
White Lead—
Alexandria, 10 brls.

GLASGOW.

Week ending June 30th.

Ammonium Carbonate—
Christiania, £44
Ammonium Muriate—
Rotterdam, £13
Ammonium Sulphate—
Amsterdam, 419 t. 18 c.
Barcelona, 20 4
Riga, 29
Valencia, 292 16
Bleaching Powder—
Geelong, 3 t. 12¾ c.
Melbourne, 7 7
Boracic Acid—
Hiogo, £90
Montreal, £28 4s.
Borax—
Hiogo, £67
Melbourne, 36
Montreal, 63
Carbolic Acid—
Hong Kong, £50
Castor Oil—
Adelaide, £20
Coal Products
Benzine
France, £85
Creosote Oil
France, £3,016
Hamburg, 11 t.
Pitch
Calcutta, £253
Canada, 126
Hamburg, 10 t. 19 c.
U.S.A., 38
Tar
Montreal, £90
Rangoon, 55
Coal Products *(otherwise undes.)*—
Gothenburg, £21
Copper Sulphate—
Drontheim, 5 t. 7⅛ c.
Extracts—
Canada, £129
Cornwall, 330
Hiogo, 24
Montreal, 72
Toronto, 205
Victoria, 133
Waterloo, 66
Hydrochloric Acid—
Bombay, £80
Kainit—
Sydney, 5 t.
Lead Nitrate—
Montreal, £100
Magnesia—
Adelaide, £21
Manganese Oxide—
U.S.A., £110
Manganese (Recovered)—
Basle, £95
Rotterdam, 65
Nitric Acid—
Bombay, £720
Madras, £25 12s.
Paint—
Bombay, £98
Colombo, 87
Painters' Colours—
Adelaide, £131
Antwerp, 22
B. Ayres, 167
Colombo, £17 10s.
Hiogo, £34
Hong Kong, 132
Melbourne, 99
Shanghai, 63
Singapore, £22 11s.
St. John's, N'fd., £17
U.S.A., 583
Paraffin Wax—
Christiania, £60
Hiogo, 400
Riga, 30
Rouen, 530
Potassium Bichromate—
Ghent, £118
Montreal, 425
Rouen, 485
Victoria, 5 t. 19 c.
Rosin—
B. Ayres, £105
Sheep Dip—
B. Ayres, £125
Sodium Bichromate—
B. Ayres, 19 c.
Ghent, 6 t. 7½
Montreal, 3 7¾
Rouen, 12 3
Sulphuric Acid—
Bombay, £780
Colombo, 39
Madras, 90
Rangoon, 1,680
Superphosphates—
Adelaide, 10 t.
Tallow—
Rotterdam, 9 t.
Turpentine—
Gothenburg, £45
Varnish—
Bombay, £30 10s.
Christiania, £5
Verdigris—
Victoria, £23 17s.

HULL.

Week ending June 25th.

Alkali—
Abo, 16 cks.
Constantinople, 150
Danzig, 50 dms.
Stavanger, 100 bls.
Alum—
Constantinople, 85 brls.
Ammonium Sulphate—
Stettin, 300 bgs.
Bleaching Powder—
Danzig, 72 cks.
Calcium Carbonate—
New York 100 bgs.
Carbolic Acid—
Amsterdam, 68 cks.
Caustic Soda—
Genoa, 35 dms.
Chemicals *(otherwise unaescribed)*
Amsterdam, 16 btls. 15 pks.
Antwerp, 5 cs. 10
Bergen, 3 cks.
Bordeaux, 10
Bremen, 2
Copenhagen, 26
Drontheim, 5
Genoa, 51
Gothenburg, 7 6
Hamburg, 17 54
Libau, 50
Marseilles, 36
New York, 10
Odessa, 238
Rotterdam, 12
Stettin, 6 6
Colours—
Jersey, 3 cks. 23 pks.
Cottonseed Oil—
Amsterdam, 590 c.
Antwerp, 688
Copenhagen, 200
Dunkirk, 203
Gothenburg, 35
Hamburg, 490
Marseilles, 2,546
Rotterdam, 472
Stettin, 300
Stockholm, 301
Dyestuffs *(otherwise undescribed)*
Antwerp, 1 ck.
Linseed Oil—
Aalesund, 17 c.
Bergen, 25
Christiania, 212
Christiansand, 88
Constantinople, 34
Copenhagen, 120
Drontheim, 234
Ghent, 7
Hamburg, 34
Stavanger, 69
Manure—
Dunkirk, 2,139 bgs.
Jersey, 90
Paint—
Bergen, 1 ck.
Stockholm, 1 cs.
Painters' Colours—
Abo, 65 cks
Amsterdam, 7 4 dms.
Antwerp, 21 8 cs.
Boston, 24
Bremen, 2
Christiania, 41
Christiansand, 80
Copenhagen, 4
Danzig, 2
Drontheim, 6
Genoa, 15 4
Ghent, 5 31
Gothenburg, 12 230
Hamburg, 10
Konigsberg, 10
Libau, 28
Marseilles, 7
Odessa, 101
Rotterdam, 2 1 15
Stettin, 20
Stockholm, 93
Phosphate—
Riga, 400 t.
Pitch—
Abo, 175 cks.
Antwerp, 4 4 t.
Gothenburg, 24 cks.
Soap—
Amsterdam, 145 cs.
Hamburg, 1
Stettin, 1
Starch—
Odessa, 1 200 cs.
Tallow—
Amsterdam, 23 cks.
Stockholm, 5
Tar—
Abo, 100 brls.
Amsterdam, 5
Antwerp, 10 cks.
Bremen, 10
Bergen, 2 1 cs.
Copenhagen 1
Danzig, 5 brls.
Dunkirk, 3
Marseilles, 96
Turpentine—
Drontheim, 1 ck.
Varnish—
Amsterdam, 5 cks.
Antwerp, 1 cs.
Bordeaux, 2
Drontheim, 2
Ghent, 2 brls.
Hamburg, 5
Stettin, 29
Stockholm, 1 cs.

TYNE.

Week ending June 25th

Alkali—
Gothenburg, 5 t. 1 c.
Aluminium (Metal)—
Pozzuoli, 7 c.
Alum Waste—
Aalborg, 11 t. 4 c.
Copenhagen, 12 13
Ammonia—
Hamburg, 20 t.
Antimony—
Copenhagen, 10 c.
Gothenburg, 1 t.
Barium Binoxide—
Hamburg, 2 t. 1 c.
Barytes—
Hamburg, 15 t.
Bleaching Powder—
Antwerp, 10 t. 18 c.
Bergen, 2 3
Christiania, 6 4
Gothenburg, 337 8
Hamburg, 5 11
Rotterdam, 13 10
Trondhjem, 19 17
Caoutchouc—
Antwerp, 3 qrs.
Carbolic Acid—
Rotterdam, 5 t. 14 c.
Caustic Soda—
Antwerp, 5 t. 4 c.
Copenhagen, 7 4
Gothenburg, 63 8
Iron Oxide—
Stavanger, 2 c.
Magnesia—
Antwerp, 9 c.
Hamburg, 1 t. 13
Ochre—
Archangel, 5 c.
Christiania, 16
Paint—
Antwerp, 2 t. 15 c.
Gothenburg, 12
Hamburg, 2 1
Montreal, 5
Rotterdam, 1 2
Painters' Colours—
Rotterdam, 100.
Soda—
Christiania, 7 t. 7 c.
Rotterdam, 10
Soda Ash—
Antwerp, 1 t. 7 c.
Bergen, 10
Christiania, 5 8
Gothenburg, 129 9
Sodium Sulphate—
Antwerp, 1 t. 1 c.
Gothenburg, 5 7
Sulphur—
Gothenburg, 25 t.
Tar—
Archangel, 21 t. 3 c.
White Lead—
Archangel, 5 c.
Montreal, 32 t. 5

GOOLE.

Week ending June 22nd.

Benzol—
Boulogne, 25 cks.
Chemicals *(otherwise undescribed)*
Antwerp, 3 cks.
Boulogne, 2
Hamburg, 29
Coal Products *(otherwise undes.)*—
Amsterdam, 50 cks. 5 cs.
Boulogne, 79 5 1 dm.
Rotterdam, 7
Dyestuffs *(otherwise undescribed)*
Ghent, 1 ck.
Painters' Colours—
Amsterdam, 10 cks.

GRIMSBY.

Week ending June 25th.

Alkali—
Hamburg, 7 cs.
Caoutchouc—
Malmo, 1 cs.
Chemicals *(otherwise undescribed)*
Dieppe, 1 ck. 3 cs.
Rotterdam, 14
Coal Products *(otherwise undes.)*—
Dieppe, 123 cks.
Hamburg, 10 btls.
Painters' Colours—
Antwerp, 3 cks. 1 pk.
Dieppe, 3
Rotterdam, 4 1 brl.
Pitch—
Dieppe, 3 brls.

PRICES CURRENT.

WEDNESDAY, July 6th, 1898

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	6/-	&	8/6
„ Glacial .. .. „		37/6	
Arsenic S.G., 2000° .. .. „	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
„ (Cylinder), 30° Tw. .. .. „	0	3	6
Nitric 80°Tw. .. .. per lb	0	0	1¾
Nitrous .. .. „	0	0	1¼
Oxalic .. .. nett „	0	0	3¼
Phosphoric, 1750° .. .. „	0	0	1¾
Picric .. .. „	0	1	0
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
„ (monohydrate) .. .. „	5	10	0
„ (Pyrites, 168°) .. .. „	3	0	0
„ „ 150° .. .. „	1	5	0
„ (free from arsenic, 145°) .. .. .. „	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. „	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. „	0	1	1
Arsenic, white powdered .. .. nett per ton	16	5	0
Alum (loose lump) .. .. „	4	10	0
Alumina Sulphate (pure) .. .. „	4	0	0
Aluminoferric .. .. „	2	3	6
Aluminium (Ingot metal 98/99¼ % .. .. ne „	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	4
„ ·880=28° B. .. .. „	0	0	2¾
„ =24° B. .. .. „	0	0	1¾
„ Carbonate .. .. nett „	0	0	3
„ Muriate .. .. per ton	17	5	0
„ „ (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
„ Nitrate .. .. per ton	31	0	0
„ Phosphate .. .. per lb.	0	0	3
„ Sulphate (grey) London .. .. .. per ton	9	6	3
„ „ (grey) Hull .. .. „	9	5	0
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt „ .. .. „	0	0	5
Antimony .. .. per ton	37	10	0
„ (tartar emetic) .. .. per lb.	0	0	6¾
„ (golden sulphide) .. .. „	0	0	9
Barium Chloride .. .. per ton	6	17	6
„ Carbonate (native) .. .. „	3	10	0
„ Sulphate (native levigated) .. .. .. „	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett „	5	2	6
„ Liquor, 7 % .. .. „	3	10	0
Bisulphide of Carbon .. .. „	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	0
China Clay (at Runcorn) in bulk .. .. .. „	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. „	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	5
Benzol, 90's .. .. per gallon	0	0	10
„ 50/90 „ .. .. „	0	0	10½
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
„ (crystallised 40°) .. .. .. per lb.	0	0	7
„ (liquid 95/97% .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. „	0	0	2½
„ (filtered for Lucigen light) .. .. „	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. „	0	0	5½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. „	1	0	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	50	5	0
„ Sulphate .. .. „	16	5	0
„ Oxide (copper scales) .. .. „	46	0	0
Glycerine (crude) .. .. „	28	0	0
„ (distilled S.G. 1250°) .. .. „	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
„ Sulphide (antimony slag) .. .. „	2	0	0
Lead (sheet) .. .. — .. .. „	14	5	0
„ Litharge Flake (ex ship) .. .. „	17	10	0
„ Acetate (white „) .. .. „	26	0	0
„ „ brown „) .. .. „	17	10	0
„ Carbonate (white lead) pure .. .. .. „	17	0	0
„ Nitrate	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
„ „ (grey) (ex ship .. .. „	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
„ Chloride (ex ship) .. .. per ton	7	10	0
„ Carbonate .. .. per cwt.	1	17	6
„ Calcined Magnesia .. .. per ton.	10	0	0
„ Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. „	17	15	0
„ Borate .. .. per cwt.	2	5	0
„ Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. „	0	2	7
„ „ Miscible, 60° O.P .. .. .. „	0	4	0
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. „	18	5	0
Stearine .. .. per ton	24	10	0
Phosphorus (yellow) .. .. per lb.	0	1	11
„ (red) .. .. „	0	2	8
Potassium Bichromate .. ..nett per lb.	0	0	3¼
„ Carbonate, 90% (ex ship) .. .. .. per ton	15	5	0
„ Chlorate .. .. per lb.	0	0	3¼
„ Cyanide, 98% .. .. „	0	1	3
„ Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
„ „ (Caustic Potash) 75/80 % .. „	19	0	0
„ Potash Hydrate Liquid 50 % .. .. „	11	0	0
„ Nitrate (refined) .. .. „	19	15	0
„ Permanganate .. .. per cwt.	3	2	6
„ Prussiate Yellow .. .. per lb.	0	0	6½
„ Sulphate, 90 % (ex ship .. .. per ton	9	15	0
„ Muriate, 80 % do.) .. .. .. „	8	15	0
Silver (metal) .. .. per oz.	0	2	3⅛
Sodium (metal) .. .. per lb.	0	2	9
„ Carb. (refined Soda-ash) 48 % ..nett per ton f.o.r. wks.	4	15	0
„ „ (Caustic Soda-ash) 48 % .. „ „ f.o.r. wks.	4	5	0
„ „ (Carb. Soda-ash) 48% .. .. „ „ f.o.r. wks.	4	0	0
„ „ (Alkali) 58 % .. .. .. „ „ f.o.r. wks.	4	2	6
„ „ (Soda Crystals) .. .. .. „ „ f.o.r. wks.	2	5	0
„ Acetate (ex-ship) .. .. „	11	7	6
„ Arseniate, 45 % .. .. „	12	10	0
„ Chlorate .. .. per lb.	0	0	3½
„ Borate (Borax) .. .. net, per ton.	12	10	0
„ Bichromate .. .. „ per lb.	0	0	3
„ Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton 10 ton lots	8	5	0
„ „ (74 % Caustic Soda) „ „ „ 10 ton lots	8	0	0
„ „ (70 % Caustic Soda) „ „ „ 10 ton lots	7	2	6
„ „ (60 % Caustic Soda) .. „ „ 10 ton lots	6	2	6
„ „ (pure liquor 90° Tw.) .. „ „ 10 ton lots	3	15	0
„ „ 77/78 % powdered (99 % hydrate) „	11	10	0
„ Bicarbonate .. .. „	6	10	0
„ Hyposulphite .. .. „	5	5	0
„ Manganate, 25% .. .. „	15	0	0
„ Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
„ Nitrite, 98 % .. .. per ton	25	10	0
„ Phosphate .. .. „	9	10	0
„ Prussiate .. .. per lb.	0	0	5¼
„ Silicate (glass) .. .. per ton	4	10	0
„ „ (liquid, 100° Tw.) .. .. „	3	7	6
„ Stannate, 40 % .. .. per cwt.	3	2	9
„ Sulphate (Salt-cake) .. .. per ton.	1	5	0
„ „ (Glauber's Salts) .. .. „	1	7	6
„ Sulphide .. .. „	6	15	0
„ Sulphite .. .. „	5	0	0
Strontium Hydrate, 100% .. .. „	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5¾
„ Barium, 95 % .. .. „	0	0	4
„ Potassium .. .. „	0	0	6¾
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. „	6	3	9
„ Brimstone: Best Quality .. .. .. „	4	13	9
Superphosphate of Lime (26%) .. .. „	2	10	0
Tallow .. .. „	22	0	0
Tin Crystals .. .. per lb.	0	0	5
„ English Ingots .. .. per ton	74	10	0
Zinc (Spelter) .. .. „	20	7	6
„ Chloride (solution, 100° Tw.) .. .. .. „	6	0	0
„ Sulphate, Crystal .. .. „	6	7	6

THE

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AND

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Notices.

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Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

THE EMANCIPATION OF THE COAL TAR COLOUR INDUSTRY.

THE past week has been an eventful one for the British manufacturers of coal-tar dyes and the raw materials employed in the production of the same.

For a long time the injustice entailed by the laxity of our patent laws has been a subject for discussion and complaint among scientific societies, but comparatively recently, under the pressure of its Chemical Sub-Committee, the Manchester Chamber of Commerce did more than discuss—it took action.

The difficulties of obtaining licences for patents were raised in Parliament, and the fact that the law was a dead letter was indicated in many ways.

The grievances resulting from such a state of affairs were freely ventilated in these columns and elsewhere, and ultimately, on the initiative of the Manchester Chamber of Commerce, ably supported by Mr. Ivan Levinstein, a test case was instituted in the form of a petition to the Board of Trade for a licence under certain foreign patents.

The case for the petitioners was argued for eleven days, at a cost of about £2,000., and the arguments adduced were so strenuously supported by instances old and new, that the Board of Trade was aroused to a sense of the vital importance of this question of licences.

It has long been notorious that our Teutonic neighbours have "worked" our supine patent law administrators, in order to create a monopoly, and it is rather suggestive that they should have simultaneously laid by such large sums of money for their patents accounts; but the cost of contesting this test-petition for a licence affords an explanation of the provision of such ample reserves.

It is reasonably clear that the rainy day for which this provision was made has come, and that, now the Board of Trade has created a precedent by issuing a compulsory order for granting the licences prayed for by the petitioners, despite the strong and wealthy opposition from the other side, many other applications for licences will doubtless result.

It is somewhat remarkable that almost while the Society of Chemical Industry was conferring the honour of its Silver Medal on Dr. Perkin, who was the founder of the coal-tar colour industry, Mr. Levinstein should be the recipient of the Board of Trade order which will practically prove the stepping stone to the restoration of this industry to the country of its origin.

The history of how this industry was gradually secured by Germany has been told many times, and constitutes a splendid object lesson to the non-progressing British manufacturers who swell the lachrymose crowd of those who seek to remedy the mistakes of the past by passively lamenting the present decline of trade.

Excellent as this lesson is, they now have a still more practical lesson in the success which has attended the persistent though costly endeavours of Mr. Levinstein and the Manchester Chamber of Commerce to win back an industry which in the earlier days of superior indifference we let slip through our fingers.

At the outset the task seemed almost more than hopeless, but the text of the Board of Trade order, which we print elsewhere in this issue, shows what undaunted perseverance and ceaseless activity can achieve.

Our Book Shelf.

The Gas Engineer's Pocket Book. By H. O'Connor. 438 pp. with Index. Illustrated. London: Crosby Lockwood & Son, 1898 10/6.

This book aims at being a reference book to those engaged in the manufacture, distribution, and use of coal-gas, and also in the construction of gas works.

It is well got up and of a size which justifies its title of pocket book.

In places it overlaps some of the better known engineering pocket books, but it is quite an open question whether the inclusion of such matter does not enhance the value of the book to gas engineers, by making one source of reference self-sufficient. There are many features in the book which will make it welcome to those connected with the gas industry, despite the long existence of a somewhat similar work, of less convenient dimensions.

It is always an easy matter to find points of doubtful accuracy in works of the pocket book type, after something more than a casual acquaintance, but the present work appears to be guilty of fewer lapses than usual, though it is not wholly innocent. After our acquaintance with it we can confidently recommend it as a useful and reliable companion.

Qualitative Chemical Analysis. A. Noyes. 89 pp. with Index. London: Macmillan & Co., Ld. 1897. 5/- net.

It seems the fashion for every professor of chemistry to prepare a manual of qualitative analysis to suit the particular curriculum of his college, and Prof. Noyes has followed the fashion. The practice has its advantages and disadvantages. Among the former in this work must be included the careful instructions for the preparation of substances before testing for the bases and acids; an alternative process for the separation of arsenic, antimony, and tin; and a more delicate method for the detection of the alkaline earth metals

The book is well printed and strongly bound in cloth. It is worth procuring for the special information we have instanced, but otherwise is not particularly noteworthy.

Leather Industries Laboratory Book. By H. R. Procter. 284 pp., including index. 29 illustrations. London: E. and F. N. Spon, Ltd. 1898.

The bulk of the book is devoted to descriptions of official methods of analysis for tanning materials, and is most heartily welcome as one of the first books which emancipates the leather industry from the tyranny of rule-of-thumb methods. The author has been assisted in the oils, fats, and bacteriological sections, which have been shaped to suit the scope of the book.

Though not intended to supplant the usual laboratory text books, three sections are devoted respectively to general methods of manipulation, the examination of commercial acids, and water analysis. In section four depilitants are studied, after which follow sections on the analysis of used lime liquors, bating and curing materials, the chemistry of tannins, and their qualitative recognition. With section nine we arrive at the pith of the book, for after an historical review of the analysis of tanning materials, there are six sections devoted to the the sampling, grinding, and extraction of materials, and a description of the various methods of testing substances used for ordinary, alum, and chrome tanning.

After the oil and fat sections, we come to the consideration of dyes and dyestuffs, and the analysis of leather, which leads up to the concluding microscopical and bacteriological sections.

The general arrangement of the work is good and the illustrations effective. If fault there be it is in the index. We think so useful and important a work is worthy of a better index, despite the extensive table of contents. This, however, in no way affects the undoubted advisability of everyone connected with the tanning industry giving this work a careful perusal.

Notes on Volumetric Analysis by A. Thornton and M. Pearson. 80 pp., including Index. Illustrated. London: Longmans, Green and Co. 1898. 2/-

Realising the educational value of practical volumetric analysis, the authors have devised a series of experiments in acidimety, &c. The experiments are arranged so as to explain the principle of the reaction, the exact method of making the test, and the proper manner of record-the result. These experiments are supplemented with a collection of exercises (with answers).

There are some anomalies in the text. For instance, the instructions for reading a burette are mostly practical and to the point, but though the authors are careful to inform the young student that *meniscus* means "a little moon," they nearly kill him outright, directly afterwards by briefly ordering him to keep his eye level with the liquid in order "to avoid on error of parallax"

The *brochure* will prove very useful to teachers of chemistry, but generally speaking it is not intended or suitable for indiscriminate use by students.

Catalogues, Diaries, &c.—The profusion of year books and diaries which has characterised the various departments of trade journalism in recent years makes it a difficult task to state whether a new candidate for honours is worthy or not. The proof of the pudding, however, is in the eating, and of the diary in the using. We, therefore, decided to apply the latter test to the *Gas World* Yearbook before adjudicating thereon. After a trial of six months we can honestly say that we really look forward to its reappearance next year. As a diary it is handy, and as a reference book for the desk it has proved more useful than we ever hoped or thought possible. *Chemical and Scientific Apparatus.* J. Woolley, Sons & Co., Manchester.— This catalogue contains 470 pp. and is well illustrated. A feature is the full and diversified section on photographic cameras and requisites. It is neatly got up in cloth boards. The North Eastern Railway Co. send us their annual *Guide to Furnished Lodgings*, farm houses, &c., to be reached by their routes They also issue a splendid collection of views of scenery in the North East of England. It can be obtained from the Superintendent of the Line, York, post free, 2d. As a photo-album it is worth the price, to say nothing of the fact that along with the above guide it will help many to quickly and economically settle the "holiday" question which is imminent just now.

THE SHAREHOLDERS OF THE STANDARD OIL CO.

JOHN D. ROCKEFELLER, having been compelled by the Supreme Court to disclose the stockholders of the Standard Oil Company, has certified that the following are the holdings:—John D. Rockefeller, 9,244 shares; Martin Snider, 1; Frank Rockefeller, 1; F. B. Squire, 1; L. H Severance, 192; Charles W. Harkness, 2,076; William Rockefeller, 467; H. M. Flagler, 1,007; Benjamin Brewster, 359; H. H. Rogers, 677; John D Archbold, 287; W. H. Tilford, 53; Walter Jennings, 86; Esther J Jennings, 196; Oliver G. Jennings, 85; Emma B. Auchincloss, 85; Annie B. Jennings, 85; Oliver H. Payne, 719; Estate of Charles Pratt, 1,799; Helen J. Jacmes, 85; A. McGregor, 1; Samon H Harkness, 39; W. L Harkness, 251; total number of shares, 17.795. The component companies, when they went into the trust in 1892, had sums in cash and securities each as follows: Anglo-American Oil Company, 6,913,639·49 dols.; Atlantic Refining Company, 8,611,376 67 dols.; Buckeye Pipe Line Company, 7,941,038·15 dols.; Eureka Pipe Line Company, 1,547,055·16 dols.; Forest Oil Company, 3,528,813·11 dols.; Indiana Pipe Line Company, 2,014,053·51 dols.; National Transit Company, 25,796,712 97 dols.; New York Transit Company, 4,999,300 dols.; North-Western Ohio Natural Gas Company, 1,396,760 dols; Ohio Oil Company, 8,260,378·04 dols.; Solar Refining Company, 711,793 07 dols.; Southern Pipe Line Company, 3,021,654·87 dols.; Standard Oil Company, Indiana, 1,038,518·61 dols.; same, Kentucky, 3,604,800 78 dols.; same, New Jersey, 14,983,943 30 dols.; same, New York, 16,772,186·29 dols.; same, Ohio, 3,426,014 72 dols; Union Tank Line Company, 3 057.187·41 dols. Of all the companies there is but one that has not declared a dividend, and that is the Union Tank Line Company. All the others have declared dividends running from 29,000 dols. to 4,000,000 dols.

An Electro-Chemical Laboratory.—In the face of the extremely rapid development which has been made both on the Continent and in America in all kinds of electro-chemical and electro-metallurgical work, we are glad to note that complete testing works and laboratories have been opened in London at 91, Blackfriars-road, by Dr. O. J. Steinhart, and Mr. J. L. F. Vogel, A I E E., for this class of work. The testing installation, we understand, has been put down for the express purpose of filling the gap between the laboratory and factory, which in so many cases has prevented the development and working out of really promising processes.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Treating Sewage. C. J. Whittaker and W. C. Boyant. 14,162. June 27.
Manufacture of Matches. W. G. Cordes. 14,175. June 27.
Manufacture of Ammonia, Ammonium Chloride, and Bye-products. T. Cryer. 14,199. June 27.
Manufacture of Candles. E. Philpott. 14 215. June 27.
Aluminium Alloy. W. Robertson & G. Low. 14,235. June 28.
Manufacture of Charcoal. J. W. Dougal. 14,240. June 28.
Manufacture of Caustic Alkalies from Alloys of Lead with Alkaline Metals. C. E. Acker. 14,269. June 28.
Producing Ozone. E. Böhm. 14,307. June 28.
Manufacture of Drying Oils. J. Lewkowitsch. 13,344. June 29.
Distilling Hydrocarbons. S. Pitt. 14,360. June 29.
Discharging Coke Ovens. E. N. Trump. 14,386. June 29.
Drying Machines. G. S. de Ritter. 14,409. June 30.
Producing Ozone. E. Böhm. 14,450. June 30.
Manufacture of Calcium Carbide. J E. T. Woods & W. A. Byrom. 14,453. June 30.
Water Distilling Apparatus. J. T. Waine. 14,488. June 30.
Treating Zinc Sulphide Ores. H. R. Angel. 14,523. July 1.
Measuring Pipette. P. Weissgerber. 14,519. July 1.
Deodorizing, etc., Fats and Oils. E. Andreoli. 14,569. July 1.
Deodorizing, etc., Fats and Oils. E. Audreoli. 14,570. Juy 1.
Electro-deposition of Metals. P. Greenfield. 14,599. July 2.
Producing Zinc Oxide. R. Matthews. 14,647. July 2.
Extracting Chemical Products from Raw Materials. L. C. Reese. 14,648. July 2.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in and Apparatus for the Manufacture of Flowers of Sulphur. R. H. Davidson and The United Alkali Co., Ltd., both of Gt1, Exchange Buildings, Liverpool. Eng. Pat., 17 476. July 24, 1897.

The sulphur is volatilized in the condensing chamber in a direct heated pot, the waste gases from which heat a second pot outside the condensing chamber, in which the sulphur is melted before being run into the volatilizing pot. The end of the condensing chamber remotest from the volatilizer is connected with the latter by a flue in which a fan is operated. In this way the comparatively cool gases from the end of the condensing chamber are constantly exhausted and propelled over the surface of the boiling sulphur in the volatilizing pot. By thus constantly circulating the gases in the chamber, the sulphur vapour is more rapidly removed from the neighbourhood of the volatilizer to the condensing area, producing an increased proportion of fine flowers, with a simultaneous economy in fuel. There are four figures.

Apparatus for the Manufacture of Acids and Similar Substances. P. A. Newton, 6, Bream's Buildings, Chancery-lane, W.C. (communicated by The Baker and Adamson Chemical Co., Easton, Pa., U.S.A.) Eng. Pat., 7,565. Mar. 29, 1893.

The invention relates to the preparation of acids obtained by the absorption of a gas by a liquid, and to hydrochloric acid in particular. The gas is passed through a series of tubes in which water is flowing in the opposite direction, the gas and water pipes being cooled by water or other cooling agent. The apparatus (which is illustrated by three figures) is very simple. The pipes are arranged horizontally one above the other, the ends being enclosed in vertical stand-pipes. The gas is fed up one of these, passes over the surface of the flowing water in the horizontal pipes, and escapes up the other stand-pipe. A baffle plate at the end of every alternative horizontal pipe keeps the latter just half full of water, the excess overflowing into a gutter-like projection on the pipe below, thus following a zig-zag course until it escapes from the lowest pipe. The whole area of the tier of pipes between the vertical stand-pipes can be cooled by immersion or by running water.

Improvements in and Relating to Electric Furnaces for the Manufacture of Carbides. R. Memmo, Via Volturno, Rome. Eng. Pat., 14,022 June 8, 1897.

The hearth of the furnace is movable and can be lowered by mechanical means as fast as the carbide is formed in the neighbourhood of the poles between which the electric arc is maintained. In this way a mass of carbide of the same diameter as the furnace, and as long as the fall of the bottom will permit, can be formed continuously. The mixture of lime and coal is fed in through a heating chamber and hopper situated over the furnace, the gases generated at the poles being mixed with air and burnt to heat the charge in the hopper. The supply of air is heated by passing through a circular flue built in the wall of the lower part of the furnace in which the column of carbide is accumulating. There are three figures which should be consulted for the details of construction.

Improvements in Process for the Production of Chemical Compounds by Electrolysis. J. W. Richards and C. W. Roepper, both of Bethlehem, Pa., U.S.A. Eng. Pat., 9,637. April 26, 1898.

The process relates to the production of compounds, in which one element is supplied by the electrode. For instance, cadmium sulphide obtained by electrolysing say a 10% solution of sodium hyposulphite with cadmium electrodes. A feature of the process is the employment of an alternating current, by the use of which cadmium sulphide and hydrogen gas are liberated alternately at the same pole, as it first acts as anode and then cathode. It is claimed as an advantage that in consequence of this alternate formation of salt and gas the former is more easily detached from the electrodes, and the surface of the latter kept clean and effective. By using different electrodes such as one of cadmium and one of zinc double compounds may be obtained. The process is applicable to all compounds which are not attacked by the gas liberated at the cathode. In the majority of cases it is harmless.

Process for Manufacturing Metallic Sulphides Electrolytically. J. W. Richards, and C. W. Roepper, both of Bethlehem, Pa., U.S.A. Eng. Pat., 9,638. April 26, 1898.

This specification is substantially the same as the foregoing, only an alternating current is not used, so that carbon is used for the cathode. In preparing cadmium sulphide, a product of better colour is obtained by heating the electrolyte to 75°C., and adding 5% sodium chloride. On the contrary, with antimony sulphide the best results are attained with a cold electrolyte. By using an alloy for the anode, compound sulphides may be produced.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for May. The total shipments were 86,431,145 gallons, compared with 84,714,994 gallons in 1897. The total for the 11 months ending May, 1898, was 929,230,448 gallons, against 867,354,421 gallons in the same period of 1897. The details of the shipments are as follows:—

CRUDE PETROLEUM.	Gallons.
Total, May, 1898	9,666,687
,, ,, 1897	8,780,025
NAPHTHAS.	
Total, May, 1898	1,884,238
,, ,, 1897	615,536
ILLUMINATING.	
Total, May, 1898	66,436,994
,, ,, 1897	70,291,809
LUBRICATING AND PARAFFIN.	
Total, May, 1898	5,812,352
,, ,, 1897	3,590,021
RESIDUUM.	
Total, May, 1898	2,330,874
,, ,, 1897	1,437,576

COLONIAL PENNY POSTAGE.—As a result of the Imperial conference on postal rates it has been agreed, on the proposal of the representative of the Dominion of Canada, that letter postage of one penny per half ounce shall be established between the United Kingdom, Canada, Newfoundland, Cape Colony, Natal, and such of the Crown colonies as may, after communication with and the approval of Her Majesty's Government, be willing to adopt it. The date on which the reduction will come into effect will be announced later. The question of a uniform reduced rate for the whole Empire was carefully considered, but it was not found possible to fix upon a rate acceptable to all the Governments concerned. A resolution was therefore adopted leaving it to those parts of the Empire which were prepared for penny postage to make the necessary arrangements among themselves. India is expected to come into the arrangement in a month or two.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

A CORRECTION.

(To the Editor of the Chemical Trade Journal.)

Sir,—In your issue of 18th June you had a very interesting article upon a new ice plant at Newcastle ; but one sentence struck us as being strange, in view of what we knew as to what had been done in the way of insulation at this work. The sentence referred to is that below the first photogravure, and states that the ice tanks "extend over the engine room, this part of the tank being thoroughly insulated with silicate cotton and match boarding."

We at once communicated with the engineer of this works, but being from home he was not able to reply till just now ; but we have his letter—dated July 6th—stating that "the only silicate used at the North Shields factory was for *deadening the sound* over the office. The insulation of tanks and walls was done entirely with your charcoal"—that is to say, with Cartvale flake charcoal, which was our understanding and the reason why we wrote to him.

In case of misapprehension arising from the paragraph referred to, we would be obliged if you could either insert this letter or an extract from it so as to correct the wrong impression.—Yours, etc.,

The Cartvale Chemical Co., Ltd.

IMPORTS AND EXPORTS FOR JUNE.

THE Board of Trade returns for the past month are more encouraging. The *imports* of chemicals and oils show an increase, but manures are lower. In the *exports* salt is much improved, mainly owing to the demand from British East Indies. Alkali is less, but other chemicals are higher.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE

Articles.	Quantities. 1897.	1898.
Margarine ..... Cwt.	70,999	65,709
Copper Ore and Regulus..... Tons	16,241	12,484
Pyrites..... ,,	47,356	51,141
Tin ..... Cwt.	47,768	30,937
Alkali ..... ,,	28,325	29,657
Brimstone ..... ,,	44,100	54,010
Dyes, Coal Tar ..... £.	48,935	59,244
Tar..... Barrels	2,588	2,165
Saltpetre ..... Cwt.	38,331	23,727
Petroleum ..... Gall.	14,431,962	15,943,236
Turpentine ..... Cwt.	29,082	67,159
Guano..... Tons.	1,075	140
Nitrate of Soda ..... ,,	8,948	5,700
Paraffin Wax..... Cwt.	48,847	56,470
Rosin ..... ,,	192,984	181,232
Tallow and Stearine..... ,,	246,330	228,493
Oil Seed Cake ..... Tons.	33,732	29,545
Wood Pulp..... ,,	37,388	31,755
Borax ..... Cwt.	—	34

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1897.	1898.
Alkali ..... Cwt.	440,186	278,797
Cement ..... Tons.	32,138	31,996
Coal and Coke ..... ,,	3,082,214	2,916,975
Copper, all kinds ..... Cwt.	66,321	80,756
Iron and Steel ..... Tons.	317,309	275,034
Chemical Manures ..... ,,	18,902	31,965
Oils, seed ..... ,,	4,216	3,289
Salt ..... ,,	47,221	71,815

Russian Oil for Spain.—The Agencia Fabra reports that many Spanish vessels that were formerly plying in the petroleum trade between Spain and the United States are now being sent to the Black Sea for supplies. The bulk of the Spanish oil fleet is already on its way to Batoum. Russian oil exporters are highly elated over the acquisition of a new market, as it is believed that as a result of the war Spain will henceforth procure her entire oil supply from Russia.

Reports of Companies.

PACCHA AND JAZPAMPA NITRATE COMPANY, LTD.

AN extraordinary general meeting of this company was held last week at Winchester House, E.C., to consider a resolution to wind up the company with a view to reconstruction. The chairman (Mr. G. A. Lockett) said that since they last met the position of the company's affairs had not improved in any way, on the contrary, they had grown rather worse. Their bankers had been pressing very hard for the transfer of the property to them, in accordance with a promise given by the board at the time the advances were made. Unless they could liquidate the debt due to their bankers, the property would have to be handed over to the latter, and then, of course, the shareholders would have nothing further to say in the matter. To prevent, if possible, such an unfortunate occurrence, the directors had prepared a scheme of reconstruction, and it was hoped that they might be enabled to carry it through for the benefit of all concerned. The present capital was £360,000., divided into 72,000 shares of £5. each, and the suggested scheme was to the effect that the shareholders should accept for each £5. share a share of £1. with 14s. paid up, thereby providing funds to enable them to pay off the liability to their bankers, to acquire new grounds adjoining the Jazpampa Estate, to equip that oficina with mules, to resume the manufacture of iodine, and to provide sufficient working capital for the purposes of the Jazpampa oficina, the Paccha oficina remaining for the time being closed. Mr. Yule said that, generally, he approved the scheme, but he did not like the idea of having to pay 6s. per share until such time as there was some chance of employing the money profitably. He suggested that only sufficient money should be called up to meet their pressing liabilities. They would then be able to keep control of the property, and if the new nitrate combination talked of became a *fait accompli* there was a probability of getting back some of their money. Mr. W. T. Morrison also considered it highly desirable that steps should be taken to prevent the property from passing out of their possession. For the present, he was opposed to their acquiring any additional grounds. Their true policy was to nurse the property until better times came. A shareholder having observed that it would be far better to go into liquidation, and at once face what loss there was, Mr. Yule pointed out that the company's shares were now unsaleable, and that it would be quite open to any shareholder not to take up the shares in the new company. The chairman, in reply, said that if a forced sale of their property took place it would not be likely to fetch much, as there were very few purchasers of nitrate grounds just now. By working economically they had a chance of getting something back if the price of nitrate should increase. Their property was too far away from other oficinas to make amalgamation with some other company practicable. The manager and everybody else on the coast had been discharged, with the exception of two caretakers, and he thought the total annual expenses might be kept down to £750., or thereabouts. They were now receiving £1,500. a year for their iodine, which would more than cover their outgoings, and this income from iodine might be counted on for three or four years longer. Their bankers—the Bank of Tarapaca— refused to wait for their money, although 5 per cent. interest was being paid for it. Three months interest was at the moment owing, but that was a sum of no particular consequence. He could not help thinking that, in view of all the circumstances, the action of their bankers was somewhat arbitrary. A shareholder suggested that probably the bank had a purchaser ready on the coast, but the chairman said he did not think that that was so. Eventually, a resolution to wind up the company voluntarily was carried unanimously, and it was stated that, at the meeting which would have to be held to confirm it, the scheme of reconstruction would be formally submitted to the shareholders.

LAUTARO NITRATE CO., LTD.

The tenth annual general meeting of the Lautaro Nitrate Company, Limited, was held on Tuesday, at Winchester House, Old Broad-street, E.C.—Mr. H. A. Rau presided, and in moving the adoption of the report, said the balance of net profit (£33,078.) had been arrived at after writing off the customary expenses of maintenance and renewals, making due provision for the debenture service, and allowing for depreciation of grounds, plants, etc. The bad feature of the present situation was the continuance of low prices, which were the result of tremendous competition between nitrate manufacturers. This competition had produced a loss to most of the producers, and for the present, he regretted to state there was no serious disposition on the part of the nitrate makers to form a combination which would not only restrain the production, but also centralise the sales. The most hopeful sign in the situation was the considerable increase in the consumption, which, during the year, had been 11 per cent. The consumption ten years ago was 670,000 tons, as against 1,175,000 tons, or an increase of 75 per cent. He believed if their expectations were fulfilled—and he thought there were

reasonable grounds for hoping they would be fulfilled—they might expect to see the consumption equalise the production. Their policy at present was to wait, and they were able to wait as well as any other nitrate company. During the last combination a great many people put up new oficinas, and had enormously increased the total production. The directors, on the other hand, had tried to improve their existing works and increase their nitrate border, with satisfactory results.

SOCIETY OF CHEMICAL INDUSTRY.

ANNUAL GENERAL MEETING.

Wednesday, July 13th.—It is eight years since the Society met at Nottingham, on which occasion Sir Lowthian Bell was president, since when Nottingham has been raised to the dignity of a city.

The business portion of the annual gathering was begun at 10 30 a.m. in the large lecture theatre of University College. The election of officers resulted as follows :—

President : George Beilby ; *Vice-Presidents :* Prof. F. Clowes, D. Sc., George E. Davis, John Heron, David Howard, Prof. A. K. Huntington, Dr. Charles A. Kohn, Ivan Levinstein, A. Gordon Salamon, Dr. W. Jay Schieffelin, Dr Edward Schunck, F.R.S , Wm. Thorp, B. Sc., and Thomas Tyrer ; *Ordinary Members of Council :* R Forbes Carpenter, Sir John Evans, K.C.B., F.R.S., Sir David Gamble, Bart., C.B., W. Winwood Gossage, Oscar Guttmann, Prof. J J. Hummel, Dr. Rudolph Messel, B. E R. Newlands, John Pattinson, Sir Robert Pullar, Walter F. Reid, and E. C. C. Stanford ; *Honorary Treasurer :* E. Rider Cook ; *Hon. Foreign Secretary :* Dr. Ludwig Mond, F.R.S.

REPORT OF COUNCIL.

The Council in their report for the year state :—We have the honour to report that the number of members on the register is 3,185, as compared with 3,037 at the last annual meeting. During the year 299 new members have been elected, as compared with 226 last year. This is the largest number since 1885, when 345 elections were recorded, though 1890, with 298, runs it close. The loss has been 151, as compared with 162 last year. Among the latter are 27 deaths : Dr. M. Alsberg, L. Ashworth, J. J. Bowrey, Charles Cochrane, Sir Henry Doulton, S. E. Field, G. Fletcher, J. W. Freestone, W. A. L. Hammersley, Henry Hills, J. H. Hodgkinson, Thos. Holliday, Dr. F. Hurter, Thos. Jackson, Alfred Julien, Jas. E. King, Horace Koechlin, H. W. Langbeck, Dr. H Lassing, Robt. Mitchell, Jas. Napier, W. S. Pritchard, Harold Rawcliffe, Charles L. Stanley, Edmund Tonks, J. Ivens Vaughan, and G I. J. Wells.

During the past session, 87 papers have appeared in the Journal, as compared with 104 last year The excess of revenue over expenditure amounted last year to £737. 12s. 5d , as against £1,011. 3s. 11d. the year before. In 1896 the receipts from the Collective Index were £347. 5s , against £7. 0s. 6d. in 1897 ; while the expenditure on Index account was almost the same in each year. This accounts for the smaller surplus in 1897.

The Collective Index is nearly finished, and will very shortly be in the hands of members. Our thanks are due to the special committee which, to relieve the pressure on the indexer, has undertaken the entire work of revising page proofs.

It appears that most of the early work on this index had to be done again, and so heavy is the task, that no printer in London had type enough to keep the whole standing for revision.

The sanction of the meeting was asked for a slight modification of the bye-laws, notice of which was given in the April number of the Journal. The first three changes concern the taking of the ballot at annual meetings, and bring the general bye-laws into more perfect harmony with those of the sections. It is proposed that, when the number of nominations by members does not exceed the number of vacancies on the Council, no ballot shall be taken, but that when the nominations exceed the vancancies, the existing practice shall be followed. The proposed change, besides saving money, will expedite the business of annual meetings when, as on the present occasion, there is no contest. The remaining amendment is a purely verbal one to render a vague expression clear.

Another matter referred to was the interest taken by Dr. Clowes in furthering good feeling among the Kindred Societies, as instance by the Associated Soiree at Prince's Hall, Piccadilly, and the thanks of the Council were accorded him.

The following chairmen of sections retire this year :—Prof. C. F. Chandler (New York), Mr George E. Davis (Manchester), Mr. Thos. Fairley (Yorkshire), Dr. Chas A. Kohn (Liverpool), and Dr. Rudolph Messel (London). They are succeeded by Messrs. Thomas J. Parker, David Watson, D. Sc., Christopher Rawson, Alfred Smetham, and Boverton Redwood. Mr. John Heron retires, and is succeeded by Mr. A. R. Ling, as Hon. Secretary of the London section. Prof. H. R. Proctor has been induced to retain his post for another year.

THE PRESIDENT'S ADDRESS.

In the first place the president acknowledged the welcome afforded to the society by the Nottingham Corporation. He then went on to compare the society's present position with its past. The membership of the society, he said, has now reached a total of over 3,000, and it must be remembered that this large enrolment has been secured in a period of only 17 years.

GROWTH OF THE SOCIETY.

The members of the society value the organisation on account of the information brought together in their Journal. But they have further advantages afforded them by the increased opportunity of meeting together, owing to the establishment of local sections. The existence of these local sections is an important and somewhat special feature of our Society. These sections are now existent and active in London, Manchester, Liverpool, Newcastle, Nottingham, Leeds, Glasgow, and New York ; and the existence of a New York section is an indication that the importance of the work of the society is felt outside our own country ; this is further proved by the very large number of foreign general members who have enrolled.

Those who have watched the gradual rise and development or these local sections of the society will acknowledge the very important service which has been rendered by the provincial colleges. The great importance and advantage of the movement, which has brought higher university instruction into our large provincial centres, are now universally conceded. But there is cause for congratulation, amongst those who are endeavouring to promote the advancement of applied science in this country, that the foundation of a university college in a provincial centre has not only led to the introduction of higher instruction in pure science, but has also advanced in a most important way the interest and education in applied science.

He then recited some of the advantages experienced at the Nottingham University by the union of the College with a section of the society. Proceeding, he said : I have been tempted to speak at some length of the experience of the Nottingham section—the section with which I have had the longest experience and have been for many years personally identified—not because I desire to place it in an unduly prominent position ; but rather because the origin and development of the section are, I believe, typical, and represent what has already occurred in most, if not in all, of the other sections of the society. May I add that we hope that the society is destined yet to see a similar rise and development of new sections in other important industrial centres of this country? And may we not further hope that the existence of a branch of the society in New York proves that sections of this society are destined to arise generally in the industrial English-speaking communities of the world, and to lead thus to a federation of interest in the advancement of industrial chemistry, which may even antedate that more general world-wide federation in general British interests which our politicians are desirous of fostering?

A glance down the names of those who have served the society since its foundation, shows that its interests have been promoted by men who stand prominently before the chemical world, not only as industrial chemists, but also as teachers, as investigators, and as professional chemists ; and the stimulus given by such men, who, whilst leading a busy life, have found time to help forward the objects of the society, probably accounts for its continued and increasing progress. During the year which you have allowed me the honour of serving you, I have been gratified to hear of larger accessions to our membership, in the monthly list which is presented at our Council meetings, than have occurred during any recent year.

THE LOSSES OF THE YEAR.

The gratification which is naturally felt in seeing the society thus largely increasing in numbers and in usefulness is, however somewhat alloyed by the notification of the loss by death of no less than 27 members, and we have to note with regret in the list of recently deceased members the names of such men as Sir Henry Doulton, Horace Koechlin, Dr. F. Hurter, and Charles Cochrane ; whilst amongst those who are not members, but whose names are classical, are further to be noted Sir Henry Bessemer, Paul Schützenberger, and August Kekulé. It is only right that we should unitedly avow our indebtedness to men who have exerted so important an influence in furthering the objects which our society has in view.

Having described the individual careers of these industrial celebrities he next referred to the Society's

MEDALLIST, WILLIAM HENRY PERKIN,

with regard to whom the President said :—You are probably all aware that, like Doulton and Bessemer, Perkin has been the founder of a great and important industry. The production of artificial colouring matters from coal-tar products owes its origin, and in large measure its development, to Perkin. As industrial chemists you will all undoubtedly be able to appreciate the great importance of this department of Perkin's work. You will also undoubtedly wish that his devotion to the interests of our Society should be acknowledged. We

find him actively supporting this Society in its foundation and in the critical early years of its existence. In 1884 he was elected to serve as its President. Of the very great services which Perkin has rendered on the Council and committees of this Society many here could join me in speaking in the highest terms. But I am sure that you will wish me to add to the causes of our appreciation which I have already mentioned, the very great additions to our science which have resulted from his chemical researches. On looking through the lists of chemical papers in the catalogue of scientific papers edited by the Royal Society, Perkin's name stands very high in the honour list of indefatigable and successful investigators, and he ranks in this respect with the leading chemists of our times. As he has told me himself, he has almost continuously, since his early schooldays, been following scientific research as a recreation ; and this was the case even during the years when he was f unding and conducting a large chemical manufactory.

You will, I trust, pardon me if I venture to refer to my own early connection with our medallist, and say that I rank it as an honour, shared amongst others by Edward Rider Cook, John Spiller, William Thorp, F. J. M. Page, and William Garnett, to have been a schoolfellow of Perkin We all of us owe a great debt of gratitude to the City of London School, then situated in Milk-street, Cheapside, but since removed to the Victoria Embankment. That school was then under the headmastership of the Rev. Canon Mortimer, D.D., and was the pioneer amongst the schools in giving instruction in natural science.

The science-master of those days was to most of us for a time also our form-master. Thomas Hall—still affectionately termed by us "Tommy"—was the man who gave us our early teaching in science, and who by his infectious enthusiasm led us to look upon natural science as an entrancing pursuit. To those of us who were juniors to Perkin at the school, Perkin, who had just made his discovery o' "mauve," was freely held up as an illustration of what advantages might be secured by a scientific training. In fact, Thomas Hall, who otherwise does not appear amongst the discoverers of his day, may be said to have made one all-important discovery : he discovered Perkin. It was while Perkin was in Hall's form, and before he had shown special aptitude for any department of study, that his form-master discovered in him an enthusiasm for experimental chemistry, which the master wisely fostered and encouraged to the utmost. In 1851 we find young Perkin assisting in the preparation of the chemistry lectures at the school ; and two years later, when he was only 15 years old, he went by Hall's advice to the newly instituted Royal College of Chemistry with the intention of continuing his chemical studies under Dr A. W. Hofmann. Perkin's rapid advance is marked by the fact that two years later he was acting as assistant to Dr. Hofmann in his research laboratory. In the following March he communicated his first research to the Chemical Society ; and during the Easter recess (1856), while he was attempting to produce quinine artificially, he discovered "aniline purple" or "mauve"—a discovery which laid the foundation of the extensive coal-tar colour industry of the present time.

And here it is only right to refer to the enthusiasm which the late Dr. Hofmann aroused, as a teacher and investigator, in the students and assistants who were so fortunate as to be associated with him ; and many men who hold prominent positions in our Society owe their early instruction and impetus to this great and genial master.

Experiments made at Messrs. Pullars' dye-works at Perth encouraged Perkin, at the early age of 18, to devote himself to the development of his discovery, and to extend the laboratory preparation of mauve to an attempt at its manufacture. The manufacture involved the preparation of various substances on the large scale, which had hitherto only been made in small quantities in the laboratory : it was further necessary to devise entirely new plant. But the scientific knowledge and inventive and practical resource of Perkin were equal to surmounting these difficulties. Working in association with his father and brother, the new dye was manufactured and actually sold to the silk dyer in 1857—the year immediately succeeding its discovery.

In 1873, Perkin retired from strictly technical pursuits, and he has since devoted himself indefatigibly to scientific research, with the most important results. He is still continuing a research on magnetic rotation, and many instalments of his results have already been published.

SOME TECHNICAL MATTERS.

In concluding my address, I will now only briefly allude to some matters of applied science which have of late years been prominently under my notice.

Living for upwards of 20 years as a teacher in mining districts, my attention has been constantly directed to the improvement of scientific methods applied to coal-mining, and more especially to methods at once delicate, exact, and trustworthy, for detecting and measuring the firedamp or methane in the air of the mine. Careful experiments, which were widely extended both in the laboratory and in the coal-mine, led me to infer that no simple and practicable method equalled in these respects the hydrogen flame when safely and suitably applied. The "flame-cap" over the standard hydrogen flame, as it is seen in the suitably-fitted safety lamp, not only detects, but measures firedamp with great precision. This standard test-flame has since been adapted to the detection and measurement of coal-gas in air, and, in conjunction with Mr. Boverton Redwood, our newly-elected London chairman, I have applied it also to the detection and measurement of petroleum vapour in the air.

The new illuminant, acetylene, has claimed in some measure in recent years the attention of most of us. It cannot be maintained that acetylene is a newly discovered gas, or even that the material from which it is now produced is new to science. But it may certainly be claimed that the cheap production on the large scale of the calcium carbide, from which acetylene is most economically prepared, is a recent discovery. And it is this discovery which has brought acetylene to the front as a possible and powerful illuminant. An inspection of the flame of acetylene, when it is suitably produced from an appropriate burner, is sufficient to satisfy anyone that it is most desirable to secure the service of this brilliantly burning gas. Apparently the general adoption of acetylene for illuminating purposes is being delayed by the feeling that the gas is dangerous ; and there certainly are not wanting instances of dire disaster arising from its preparation and storage.

In the liquid condition acetylene can undoubtedly, owing to its endothermic character, undergo most violent explosive decomposition, yet Raoul Pictet strongly urges that the liquid is safe if it is suitably prepared and stored. In the gaseous form we are assured by Vivian Lewes that the gas does not undergo this explosive decomposition when it is stored under a pressure less than two atmospheres. Lewes further states that this gas may be burnt in such a way, if it is properly prepared, as not to rapidly cause obstruction in the burners—a difficulty which has caused trouble in the past ; he further states that while it is not of use for enriching coal-gas, it is a valuable enricher of oil-gas.

It is to be hoped that the public may ultimately receive satisfactory assurance that they can employ acetylene as an illuminant with success and safety under suitable conditions. It will be remembered that other endothermic substances, such as nitroglycerine or dynamite, and nitrocellulose or guncotton, have now attained this desirable condition, after having in the past worked such disaster as to cause them to be looked upon by the public as hopelessly unsafe. It must be remembered in any case that acetylene when mixed in very small proportion with air furnishes an explosive mixture, but danger arising from this cause must certainly be looked upon as preventable.

The enrichment of coal-gas, which it was hoped might have been effected by acetylene, is now usually secured by the indirect employment of water-gas. The large amount of poisonous carbon monoxide which is thus introduced into the enriched gas has naturally led to apprehension, whilst the use of carburetted water-gas has certainly given rise to serious loss of life. The substitution of a comparatively non-poisonous and highly illuminating gas, such as acetylene, for enriched coal-gas may be one of the solutions of the attempt to furnish the public with gas of high illuminating power.

Those who are interested or concerned in another important problem of applied science—the disposal of our town sewage—will watch with interest the development in recent years of the process of treatment of sewage by artificial filtration through coke or other suitable substances. This filtration is known to secure the oxidation of the putrescible matter of the sewage indirectly through the intervention of bacteria. Perhaps the nearest parallel cases are the change of sugar into alcohol and carbon dioxide under the influence of the yeast cell ; followed by the production of vinegar from the alcohol of malt liquor or "must," under the influence of the *mycoderma aceti*, which has long been known to be the organism necessary to transfer the atmospheric oxygen to the alcohol. Indeed, just as it is found necessary that the saccharine liquid shall be sown with the yeast cells, and the alcoholic liquid shall become sown with the *mycoderma*, before alcoholic fermentation and acetification can take place with rapidity ; so it is found that the bacterial filter for sewage must become infected with the bacteria necessary for the liquefaction of the suspended organic matter of the sewage, and with those suited to effect the oxidation of the dissolved organic substances, before it is in a condition to purify the sewage. In experiments conducted on the small scale, a double filtration of raw London sewage through two small coke bacterial filters has in this way effected upon the raw sewage a purification of 95 per cent. It is hoped and anticipated that experimental filters of a similar kind, but on a larger scale, which are now being started, may produce a similarly successful result, and that their action may be continuous and permanent.

CONCLUSION.

And now the time is at hand when I shall delegate my duties as President to my successor. In congratulating him and assuring him of my best wishes, I take the opportunity of thanking the members of this large Association for the entirely unexpected and unsolicited honour which they conferred upon me at their annual meeting last year. I

have served the society for many years in the past, on its council and committees in London, as well as in the important city in which we are now assembled. By electing me as your President you have conferred upon me the opportunity of higher, if not more arduous, service. No one here is conscious, as I am myself, of the extent to which the performance of these higher duties has fallen below the ideal which I have placed before me; but I trust and believe that after electing me to a position of honour which I have highly valued, you will one and all feel that I have wished and attempted to fulfil the duties which you have entrusted to me.

In the afternoon the members were entertained at a garden party given by Ald. Sir John Turney. In the evening a reception and conversazione was held at Nottingham Castle by the Mayor (C. H. Fraser, Esq.).

Thursday, July 14th—Four parties visited the following steel works at Sheffield: The Atlas Works of Sir John Brown and Co., Ltd., where they were shown the manufacture of armour plates, pressing, rolling, and finishing; manufacture of marine forgings; and tyres, springs, buffers, etc.; and blast furnaces. The Cyclops Works of Messrs. Chas. Cammell and Co., Ltd., where they were shown the rolling of an armour plate; the manufacture of crucible and Bessemer steel; the rolling of rails; the Harvey process of hardening nickel steel; the manufacture of axles and forgings, spring steel, and tool steel. The River Don Works of Messrs. Vickers, Sons, and Maxim, Ltd., where they were shown the rolling of tyres; the forging of gun parts, etc., under presses and hammers; the finishing of shafts and guns of large calibre; and armour plate finishing. At Messrs. Samuel Osborne and Co.'s Steel Works, at the Wicker Works, the manufacture of crucible steel, railway springs, and tool steel was witnessed. At the Rutland-street foundry, the Siemens-Martin furnaces, and moulding and steel founding were shown. A large casting was poured during the visit of the members.

Luncheon was provided by the Nottingham section at the Masonic Hall, Sheffield, at 1 p.m. In the afternoon visits were made to Messrs. Walker and Hall's Silver Plating and Cutlery Works and Show Rooms, the Ruskin Museum, the Mappin Art Gallery, the Sheffield Technical School, Firth College, &c., while other members returned to Nottingham and visited the following local works:—Messrs. Thos. Adams and Co.'s Lace Bleaching, Dyeing, and Finishing works; Messrs. Edward Cope and Co.'s Lace Curtain and Hosiery Factory; Messrs. Jardine's Lace Machine Works, Deering street; The Raleigh Cycle Co.'s Works, Lenton; and Messrs. Turney Bros., Ltd., Tanners and Leather Merchants. A reception by the President at the Exchange Hall (kindly lent by the Mayor), was held in the evening, followed by the annual dinner of the society.

Friday, July 15th.—As usual the third day was devoted to a pleasure excursion to Lathkill Dale, Haddon Hall and Chatsworth. The members left the Midland Station, Nottingham, by special train at 9-30 a.m. for Matlock Bath, drove by the Via Gellia to Winster, thence by Robin Hood's Stride to Alport and Youlgreave for Lathkill Dale. After a stroll up the Dale the drive was continued to Haddon Hall, where luncheon was served in the Old Oak dining room. After lunch, the party drove to Chatsworth House, proceeding thence to Baslow, where a substantial tea was provided. After tea, members inspected the park and the model village of Edensor, where Lord Frederick Cavendish is buried. The carriages left Baslow at 7 o'clock, for Rowsley Station, whence members could return to Nottingham or depart for London and Manchester.

GOLD OUTPUT IN THE RAND.

THE output from the Witwatersrand district during June, as cabled by the Chamber of Mines of the South African Republic, amounts to 344,670 ozs., while from outside districts 20,421 ozs. are reported, a total of 365,091 ozs. This shows an increase of 75 ozs., as compared with the previous total. No comparison with the corresponding month of 1897 can be made.

	1895.	1896.	1897.	1898.
	oz.	oz.	oz.	oz.
January	177,463	148,178	209,832	336,577
February ...	169,295	167,018	211,000	321,238
March	184,945	173,952	232,067	347,643
April	186,323	176,707	235,698	353,243
May	194,580	195,008	248,305	365,016
June	200,941	193,640	251,529	365,091
July	199,453	203,873	242,479	—
August	203,573	213,418	259,603	—
September ..	194,764	202,561	262,150	—
October	192,652	199,889	274,175	—
November ..	195,218	201,113	297,124	—
December ..	178,428	206,517	310,712	—
Total ..	2,277,635	2,281,874	3,034,674	2,088,808

THE COMPULSORY LICENSING OF PATENTS.

AN IMPORTANT PRECEDENT.

THE Board of Trade has made the following order in the matter of the petition of Messrs. Levinstein Limited, and Ivan Levinstein, to the Board of Trade (hereinafter called the petitioners) for an order for compulsory licences under certain foreign patents:—

Whereas by section 22 of the Patents, Designs, and Trade Marks Act, 1883, it is enacted: "If on the petition of any person interested, it is proved to the Board of Trade that by reason of the default of a patentee to grant licences on reasonable terms.

"(*a*) Thepatentis not being work in the United Kingdom, or (*b*) the reasonable requirements of the public with respect to the invention cannot be supplied, or (*c*) any person is prevented from working or using to the best advantage an invention of which he is possessed."

The Board may order the patentee to grant licences on such terms as to the amount of royalties, security for payment, or otherwise, as the Board having regard to the nature of the invention and the circumstances of the case may deem just and any such order may be enforced by mandamus.

And whereas, on the 11th June, 1889, a patent numbered 9,642 was granted to Oliver Imray of 28, Southampton Buildings, London, Patent Agent for an invention communicated to him by the Farbwerke Vormals Meister Lucius and Bruning, of Hoechst-am-Maine, in the German Empire (hereinafter called the patentees) relating to the production of oxysulphonic acids of naphthalin.

And whereas, on the 24th May, 1892, the said patent was duly assigned by the said Oliver Imray to the patentees, which said assignment was on the 27th May, 1892, duly registered at the patent office.

And whereas, on the 26th September, 1889, another patent, numbered 15,176, was also granted to the said Oliver Imray, for an invention in like manner communicated to him by the patentees relating to improvements in the production of amido-naphthol-monosulphonic acids and the manufacture of their diazo compounds and azo colouring matters therefrom.

And whereas, on the 24th May, 1892, the said patent was duly assigned by the said Oliver Imray to the patentees, which said assignment was on the 27th May, 1892, duly registered at the patent office.

And whereas, the petitioners presented a petition to the Board of Trade under the said section for an order that the patentees, under the said Letters Patent, No. 9,642, of the 11th June, 1889, and No. 15,176, of the 26th September, 1889, should grant to the petitioners a licence under, or in respect of, the inventions described and claimed in, and by the specifications of the said respective Letters Patent.

And whereas, on consideration of the said petition and of the matters therein mentioned, it has been proved to the Board of Trade that the said petitioners are persons interested in the matter of the said petition, and that by reason of the default of the patentees to grant licences on reasonable terms, the said patents are not being worked in the United Kingdom, and that by reason of the default aforesaid the said petitioners are prevented from working and using to the best advantage certain inventions of which they are possessed.

Now, therefore, the Board of Trade in exercise of the power conferred upon them by section 22 of the Patents, Designs, and Trade Marks Act, 1883, and of all other powers enabling them in this behalf, do hereby order as follows:—

1. That a licence to take effect from the date of this order and in the form set forth in the schedule hereto, be forthwith granted by the patentees to the petitioners to make, use, exercise, and vend, within the United Kingdom, the inventions described and claimed in, and by the specifications of the said Letters Patent, No. 9,642, of 1889, and No. 15,176, of 1889, for the unexpired residues of the respective terms of the said Letters Patent, at a royalty of one halfpenny for each pound weight, avoirdupois, of products made by the licensees under the said Letters Patent or either of them, but so that in each year a minimum royalty of £250 per annum shall be paid by the licensees, and the patentees shall forthwith deposit such licence duly executed by them with the Board of Trade.

2. The said petitioners before the sixth day of August, 1898, shall execute and deposit with the Board of Trade a counterpart licence in the form aforesaid and in default of their doing so this order shall be of no effect.

(Signed) Courtenay Boyle, Secretary, Board of Trade.

Dated this sixth day of July, 1898.

PERSULPHATE OF AMMONIA IN PHOTOGRAPHY.—Some interesting experiments have been made by Messrs. Lumiere and Seyewetz with persulphate of ammonia for the treatment of under exposed plates, as the result of which it is now possible to take complete advantage of under exposed negatives which have been over developed, without having any anxiety as to the hardness of the image obtained, while getting the maximum amount of details. Further, it is possible to correct the effects of over development in the case of normal exposure, a result which no known reducer has been able to accomplish. Messrs. Fuerst Bros. are prepared to supply the persulphate.

Trade Notes.

Rival Electrolytic Alkali Companies.—In the Chancery Division of the High Court of Justice on Thursday, the hearing of the action brought by the Castner-Kellner Alkali Company, Limited, *v.* The Commercial Development Corporation, Limited, was commenced before Mr. Justice Bigham, sitting as an additional judge (vide *C.T.J.* 547, pp. 309-310). Mr. Moulton, Q.C., was proceeding with his opening of the case for the plaintiffs at the time of going to press.

Subsidence Compensation in Cheshire.—The Northwich Salt Compensation Board was occupied last week for several hours in the final adjudication of claims for damage caused by the subsidence due to the pumping of brine. There were 194 claimants, and their claims were approved at £4,527. 14s. 11d., although originally seven times that amount was sought for, many of the demands being altogether outside the scope of the Brine Pumping Act. Mr. E. Milner, C.C., occupied the chair, and explained at the outset that the Board had in the bank the sum of £2,800., and had resolved that, as the funds were insufficient to meet in full the claims for damage which had occurred since the passing of the Act, up to the 31st December, 1896, they would make a *pro rata* abatement of 50 per cent. on the demands which would otherwise be payable. It was not intended that the adjudication of claims should be permanently reduced to one half, but the whole or part of the amount of abatement would at some future time be paid out of money which might be carried to a reserve fund. The Board signed cheques amounting to 50 per cent. of the claims, and payment will be made on and after the 14th inst. This is the first compensation paid for subsidence. The Act was passed in 1894, but, owing to litigation, the measure has thus long remained inoperative. All the pumpers have now paid the first year's rate, and a most memorable struggle has come to an end.

Water Gas.—The Public Control Committee of the London County Council have received a letter from the departmental committee of the Home Office which is considering the questions of the manufacture and supply of water gas, asking for the opinion of the Council on the subject. The Public Control Committee now report that, having carefully considered the matter, they have come to the following conclusions, which they have communicated to the departmental committee :—(1) That considerable danger arises from the introduction of water gas in the process of the enrichment of coal gas; (2) that non-carburetted and non-odorized water gas should not be allowed to be used under any conditions, since it is devoid of smell which would give warning of any escape of gas ; (3) that 25 per cent. should be the *maximum* amount of water gas allowed to be introduced in the enrichment of coal gas, the proportion of water gas being ascertained by determining the amount of carbonic oxide in the enriched coal gas (coal gas enriched to this extent would correspond in poisonous character to the Dowson gas which is already in use for heating purposes and for gas engines, and would exclude the use of carburetted water gas) ; (4) that when it is proposed to supply poisonous enriched gas to houses and the interior of buildings a proper inspection be made of the service pipes by a responsible officer appointed by the local or other suitable authority, who should certify that the pipes are in a sound condition and that there is no escape of gas, and that the cost of such inspection be borne by the gas company.

Sugar Bounty Conference.—On Monday a largely-attended meeting of members of Parliament and others interested in the sugar bounty question, was held in the House of Commons, under the presidency of Mr. C. B. Renshaw, M.P. There were also present Lord Stanmore, Sir Horace Tozer (Agent-General for Queensland), Mr. W. F. Lawrence, M.P., Colonel Milward, M.P., Sir Howard Vincent, M.P., Mr. McKillop, M.P., Mr. Charles Bill, M.P., Mr. R. G. Webster, M.P., Mr. Nevile Lubbock, Mr. Beaton (secretary to the West India Committee), and others. The general opinion expressed was that little good would come out of the Brussels Conference, and that there was a strong probability that no further meeting would be held owing to the difficulties with France and Russia. Mr. Nevile Lubbock, who is one of the expert advisers to the British delegates, corrected this impression, and said there was a prospect that the negotiations would come to a successful issue. Lord Stanmore read a resolution passed by the Anti-Bounty League, in which the league recorded its conviction that, whilst existing circumstances constituted a justification for the proposed grants in aid to the West Indian colonies, such grants not only did not afford a permanent remedy, but left both the home refining industry and the sugar-producing colonies entirely at the mercy of the financial policy of foreign Governments. It was resolved to impress upon the Government the danger and futility of any policy which seeks to counteract the effects of the bounty system except by their abolition or neutralisation.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are weaker 90's and 50/90's both being quoted 10d. For July/December 11d. is asked for 90's. There is no change in carbolic acids, but naphthas now stand at 1s. 3d. for solvent, and 4½d. for crude. Other products remain *in statu quo ante.*

Sulphate of ammonia is quietly steady, with rather a feeble demand. Beckton quotations are £9. 7s. 6d. prompt, and £9. 5s. for Oct./Dec. London outside makes figure at £9. 5s. ; Liverpool value is about £9. 3s. 9d. ; Hull, £9 2s 6d., and Leith, £9. 2s. 6d. to £9. 3s. 9d. all prompt. Nitrate of soda steady.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business continues somewhat dull. Both home and export demand is quiet, but prices on the whole are without material change. Current quotations for caustic soda remain as for some time past. Spot delivery, f.o.b. Liverpool, 77%, £8. 5s. ; 74%, £8. ; 70%, £7. 2s. 6d. ; 60%, £6. 2s. 6d. 10-ton lots. Ammonia alkali, soda crystals, and bicarbonate are maintained. Leblanc soda ash is in small demand, and nominally at 1d. to 1¼d. per degree f.o.b. Bleaching powder is still in excessive supply, though with rather more business doing at £5. 10s. to £5. 15s. f.o.b., and £5. softwoods, f.o.r. Chlorate of soda unaltered at 3⅝d. to 3¾d. per lb. Potash dearer at 3¾d. per lb., and with firmer tendency. Sulphate of copper is rather higher at £16. 5s. f.o.b. For saltcake there is more inquiry and price firm at 24s. to 25s f.o.r. Vitriol and muriatic acid are in good steady request. Sulphur firm at £4. 12s. 6d. per ton In potash, caustic and carbonate, trade is fairly brisk, and prices are firm. Ammonia salts generally are quiet. Muriate £17. per ton. Carbonate 3d. per lb. Anhydrous ammonia in good demand at from 1s. to 1s. 2d. per lb. For brown acetate of lime there is only moderate enquiry, and price rather easier at £5. c.i.f. ; grey, £6. 15s. per ton. Acetate of soda rather better at £11 10s. to £11. 15s. c.i.f. White acetate of lead £25. 10s. c.i.f. Brown sugar of lead £18. per ton. Bichromates are fairly steady. Prussiate of potash firm at 6¾d. per lb. White powdered arsenic £16. for best brands f.o.r. Garston. Borax unchanged. Nitrate of soda has rather a firmer outlook. Sulphate of iron is in good general demand and price firm. Aniline oil and salt are steady. For carbolic acid, liquid and crystals, demand is only small, and prices are easier. Trade is generally reported quiet from all districts.

REPORT ON MANURE MATERIAL.

The market is still quiet, but prices are firm all round. The position of Mineral Phosphates is unchanged, and quotations remain as last reported. After considerable sales of Kurrachee bone meal, autumn shipment, at £4. 2s. 6d. to £4. 3s. 9d. per ton, the price has again been advanced to £4. 10s. per ton, and September/October is now the earliest shipment sellers will undertake. From store sellers are also firmer, and £4. 10s. is again the quotation. Common grinding bones are inquired for, and the value is about £4. per ton, ex-quay, Liverpool. Nitrate of soda is, owing to arrivals, rather easier on spot, and considerable sales have been made ex-quay at 7s. 4½d. per cwt.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil firm and prices inclined to advance. Offerings are small, and sellers apparently indifferent. Olive is stagnant, and holders are disposed to accept easier prices for quay lots. Linseed is firmly held at 18s. to 18s. 6d. per cwt. for Liverpool makes in export casks. Cottonseed is quiet but steady up to now at 15s. 9d. to 16s. 3d. cwt. Castor oil is only in poor demand but prices remain 3¼d. for good seconds Calcutta ; 3d. to 3⅛d. first pressure French, and 3⅛d. for Madras. Tallow is steady with a fair business doing, but it is mostly of a private nature. Resin is moving slowly ; spot prices, however, are well maintained. Spirits of turpentine are firmer at 22s. cwt. Petroleum is quiet without change in prices either for American or Russian.

CAKES.—There has been an improved inquiry for spot parcels of American Western linseed, and holders were rather firmer, quotations marking an advance of 2s. 6d. to 5s. at £5. 12s. 6d. to £6., but Liverpool makes, although again offered at a reduction, met only a limited consumptive inquiry at £7. 5s. to £8. per ton. Good to choice brands of American decorticated cottonseed have rather a steadier market, but the demand continues on only a moderate scale at recent currencies, viz., £5. 7s. 6d. to £5. 15s, according to quality. Business in

Liverpool makes, both of decorticated and undecorticated, is still only trifling in character, though the former are now quoted at £6. to £6. 10s., and the latter at £3. 18s 9d. to £4. 10s., according to brand, being a decline of partially 5s. per ton for both descriptions from the quotations current at the close of last week. Spot parcels of Egyptian remain without material alteration in value, sellers still asking £3. 10s. to £3. 12s. 6d. per ton, but there is only a moderate inquiry going on thereat.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Prices and demand alike are dull and quiet, quotations in all positions for forward delivery are the same. The Hull and Barnsley Railway Company still continue to reap a harvest from the Coal strike in South Wales, otherwise had it been dependent upon the trade of the locality, the large increases recorded week by week could hardly have been maintained. The imports have been as against the same time a year ago :—Wheat, 1,310,979 qrs. against 1,270,953 qrs ; linseed 166,654 qrs. against 322,049 qrs , a remarkable decrease ; rape seed, 37,431 qrs., against 5 ',954 qrs., another decrease shewing a side light upon the trade in Hull manufactured goods, against heavy imports of rape oil; cotton seed, 113,752 tons, against 115,735 tons; cloverseed, 45,573 cwts., against 27,164 cwts. ; oil cake, 8,221 tons, against 6,701 tons, an increase of 207 ; olive oil, 3,584 tuns against 3,065 tuns. Lineeed oil is quiet, spot 15s. 4½d. ; the same asked also for July/August, forward last four months, 14s. 9d. ; boiled and refined, £1 to £1 10s. per ton extra. Refined cotton oil, spot naked, 13s. 6d. sellers, and to August forward, 13s. 3d. sellers ; Nov./April crude, 12s. 6d per cwt. naked ; casks, £1, and ordinary barrels, £1. 10s. per tun extra. Castor oil, from 3d. a lb. upwards. Olive oils, from £30 per ton, according to origin. Olive oil soaps firm and unchanged. The oils are scarce and dear, Cerosote making as much as 3½ per gallon. Cod oils from £16. to £18. per ton. Resins unchanged. Danish butter from 95s. per cwt. ; Swedish, 93s. ; Dutch, 84s. ; Canadians, 80s. per cwt.

CAKES.—Of very limited demand. Linseed cakes quiet, 95% pure, £7. 2s. 6d. Oilcakes (linseed), £6. 2s 6d. ; Russians, £7. to £7. 2s. 6d. Cotton cakes firm, but an exceedingly small demand ; spot, best makes, £4 to £4. 1s. 3d. ; seconds, £3. 17s 6d. Rape cakes unchanged.

PAINTS.—In good demand ; makers fully employed. Prices unchanged. Disinfectants in fair demand at unchanged rates.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Sulphate of ammonia has fallen very idle, and the quotation is again lower, but only fractionally so. Holders are pretty firm, and they wait for the passing over of the pending industrial holidays of this quarter in the expectation that business will be resumed with a revival of zest, and with prices rather on the mount again. At the moment, stuff could be got (prompt Leith) at £9. 1s. 3d. to £9. 3s. 9d., but there is really no movement. All the chemical works of the quarter are preparing for closure, or at least for stoppage of production while plant defects are made good. Sulphate of copper has been showing head to some purpose, and the quotation is now not in any case under £16. 5s. Business in ordinary chemicals has continued rather scarce, but no price changes of any mark. Baltic ports inquiries still below the average. Mineral oils and paraffins all as before.

Chief prices current are :—Soda crystals, £2. 5s. to £2. 12s. 6d. nett Tyne, soda ash, 48/52°, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, 48/52°, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 10s. to £5. nett, Glasgow ; caustic soda, white, 74° £8., 70/72° £7. 2s. 6d , 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s. od. nett, Tyne; saltcake, 25s od.; borax, English refined, £14., and boracic acid, £24 nett, Glasgow ; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d , and 1-cwt casks, £6. 15s.. nett, Liverpool ; bichromate of potash, 3¾d., nett, for Scotch and English deliveries (for export, 3½d. nett, f.o b. Glasgow) ; bichromate of soda, 3d. nett, for Scotch and English deliveries (for export, 2¾d. nett, f.o.b. Glasgow); chlorate of potash, 3¼d. less 5%, Liverpool ; nitrate of soda, 7s. 6d. to 7s. 9d ; sulphate of ammonia, £9. 1s. 3d. to £9. 3s. 9d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port ; sulphate of copper, £16. 5s. od. less 5% any port ; paraffin scale, hard, 1⅜d. to 1½d. per lb., soft, 1½d. per lb. ; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb ; paraffin spirit (naphtha), 6½d. to 7d. per gallon ; paraffin oil (burning), No. 1, 5¾d., and crystal, 6d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower) ; ditto (lubricating) 865° £4. 10s to £5 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 174 hogsheads, and 6,250 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

There is nothing fresh to report in the position here. Market continues quiet, and shipments moving away slowly. Sulphur scarce at £5. per ton net. Soda crystals in fair demand at £2. 12s. 6d. per ton, gross weight, locally. Caustic quiet, at £7. 5s to £7. 10s. per ton for 70% ; 76/77%, £8. 5s. to £8. 10s. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett ; do. hards, £5. 15s. per ton, nett ; caustic soda, 76/77% £8. 10s. and 70% £7. 10s. per ton, nett ; recovered sulphur, 2 cwt. bags, £5. os. per ton, nett ; soda ash, 48%, £4. per ton, nett ; do., 50%, £4. 2s. 6d. per ton, nett ; do., 52%, £4. 5s. per ton, nett ; alkali, 36%, £3. 12s. 6d. per ton, nett ; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett ; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett ; do., 1 cwt. kegs, £7. per ton, nett ; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett ; do., 100° Tw., £3. per ton, nett ; do., 140° Tw., £3. 7s. 6d. per ton, nett ; soda crystals, casks, £2. 12s. 6d. per ton, gross weight ; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight ; pearl hardening, £3. per ton, nett ; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett ; blanc fixe, £7. 5s. per ton, nett ; chloride of barium, refined crystals, £6. 15s. per ton, nett ; do. 90/95% crude calcined, £6. per ton nett ; sulphide of barium crystals, £4. 15s. per ton, nett ; carbonate of alumina, £30. per ton, nett ; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. to 9s. 6d per ton, f.o.b. Tees, and in steady demand.

COALS.—Market continues exceptionally firm, and there is a strong demand for steam and bunker coals. Coke is also in good request for local and export trade. To-day's prices are :—Best Northumbrian steam, 13s. 3d. to 13s. 6d. per ton ; second qualities, 12s. 3d. to 12s. 6d. per ton ; small steam, 5s. 6d. to 6s. per ton ; gas coals, 10s. to 11s. per ton ; bunker coals, 9s. 6d. to 10s. per ton ; household coals, 10s. to 11s. per ton ; coke, 18s. to 21s per ton.

New Companies.

Christie Patent Stone Co., Ltd.—CAPITAL £10,000. in £1. shares. This company has been formed to acquire and carry on the business of a manufacturer of and dealer in artificial stone and moulded concrete carried on by G. Christie, at Temple-street, Kingston-upon-Hull, as George Christie & Co., and to adopt a certain agreement. The subscribers to the memorandum of association are :—W. Burwell, Hessle, Hull, gentleman ; E. Hanger, Stoneferry, Hull, paint manufacturer ; P. L. Runton, Scale Lane, Hull, architect ; T. R. Runton, 27, High-street, Hull, oil merchant ; G. Christie, 19, Temple-street, Hull, manufacturer ; W. F. Harris, 16, Parliament-street, Hull, chartered accountant ; R. Hodgson, 16, Parliament-street, Hull, chartered accountant. Registered office, Imperial Chambers, Bowlalley Lane, Hull.

Carbide-Acetylene Trust, Ltd.—CAPITAL £8,100. in £1. shares (100 def.). This company has been formed to acquire, develop, turn to account, and work any patents, concessions and inventions, and to carry on any commercial or industrial undertaking. The number of directors is not to be less than 3 nor more than 5 ; the first are W. R. Smith, S. P. Eastick, and E. H. Hilton ; remuneration 2 guineas each per board meeting attended. Registered office, 53, Victoria-street, Westminster.

Sanitas Co., Ltd.—CAPITAL £148,000. in £1. shares. This company has been formed to acquire the business of a company of the same name (registered in 1878), to adopt an agreement with the said company and its liquidator, and to manufacture, sell, and deal in deodorants, disinfectants, antiseptics, and preserving, bleaching, chemical, medical, and sanitary articles. The subscribers to the memorandum of association are :—C. T. Kingzett, Elmstead Knoll, Chislehurst, manufacturer ; C. E. Russell, St. John's-road, E , Molesey, gentleman ; G. J. Palmer, 8, Ferncliff-road, Dalston, clerk ; C. Gerhardi, 121, Mount View-road, Stroud Green, manager ; F. H. Harris, 29, Queen's-road, Leytonstone, clerk ; J. Rendell, Maisonette, South Woodford, hosier ; W. K. Summers, 38, Cornhill, E.C., hosier.

W. H. Baxter, Ltd.—CAPITAL £75,000. in £5. shares. This company has been formed to acquire the business carried on by W. H. Baxter, at 71, Gelderd-road, Leeds, and to manufacture stone-breaking machines, ore crushing machines, automatic loading machines, mineral elevators, coke breakers, etc. The subscribers to the memorandum of association are :—W. H. Baxter, Knapping Mount, Harrogate, engineer ; J. Gordon, 1, Bond-street, Leeds, chartered accountant ; G. Hyde, 7, East Park-road, Harrogate, dealer ; W. J. Beck, 5, Ashbourne Villas, Harrogate, printer ; W. H. Simpson, Scriven-lane, Knaresbro', cashier ; C. W. Fleming, 53, Lewis-place, Wortley, foreman ; W. Warren, 61, Albion-street, Leeds, solicitor.

IMPORTS OF CHEMICAL PRODUCTS

OF

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 2nd.

Acetic Acid—
Holland, 150 pks R. W. Greeff & Co.
Germany, 11 Argo S. S. Co

Acetone—
Holland, £260 A. & M. Zimmermann
Germany, 560 Thames S. T. & L. Co.

Acids—
Holland, 50 pks. Little & Johnston

Albumen—
France, £100 Fuerst Brs.
Germany, 105 W. M. Smith & Sons

Alkali—
France, 160 c. J. Barber & Co.
,, 104 J. Harrison

Alum—
Holland, 748 pks. J. White

Ammonia—
Belgium, £100 Leach & Co.
Holland, 262 H. Lorenz

Ammonium Nitrate—
Germany, £45 Petri Brs.

Arsenic—
France, £35 Petri Brs.
Portugal, 430 Coverley & Westray

Asbestos—
Holland, £6 Robinson, Roberts & Co.
Germany, 52 L. & I. D. Jt. Co.
,, 48 Butler's Wf., Ld.
Holland, 12 T. H. Lee
France, 11 Mory & Co.

Barium Chloride—
Holland, £30 Petri Brs.
Germany, 60 ,,
,, 41 W. Caudery & Co.

Barytes—
Germany, 50 pks. G. S. N. Co.
Holland, 41 P. Jantzen
,, 24 O'Hara & Hoar
,, 50 W. H. Carey & Sons
,, 7 J. Owen
Germany, 43 cks. W. Harrison & Co.
,, 59 pks. Wilkinson, Heywood & Co.

Bleaching Powder—
Germany, £190 J. M. Steel & Co.

Caoutchouc—
Straits, 100 c. Anderson, Weber & Smith
Holland, 620 J. Barber & Co.
U. States, 4 Adams & Co.
,, 21 Chautard & Christensen
France, 27 Girard Brs. & Co.
Straits, 151 Butler's Wf., Ld.
,, 1,000 Prop. Bull Wf.
Cape, 17 L. & I. D. Jt. Co
Straits, 1,050 Gilman Brs & Co.
,, 158 R. & J. Henderson
Holland, 20 Anderson, Weber & Smith
Straits, 490 L. & I. D. Jt. Co.
,, 423 W. Pope & Co.
U. States, 87 H. Kiver & Co.
W. Indies, 3 Prop. Bull Wf.
Straits, 600 H. W. Jewesbury & Co.
Rangoon, 139 L. & I. D. Jt Co.
France, 18 Hale & Son

Carbolic Acid—
Germany, 25 pks. Blagden, Waugh & Co.

Castor Oil—
Italy, 5 brls. Wright, Layman & Co.
France, 25 cs. Beresford & Co.

Caustic Potash—
France, 240 c. W. E. Cole
,, 140 Petri Brs.

Chemicals (*otherwise undescribed*)
Belgium, £96 T. Palmer
,, 15 J. L. Lyon & Co.
,, 30 John Cockerill Line
Germany, 135 L. & I. D. Jt. Co.
,, 474 A. & M. Zimmermann
,, 11 8 pks. Butler's Wf., Ld.
,, 135 R. W. Greeff & Co.
, 7 Brit. Anti-Foulg. P. Co.
Denmark, 79 Crosse & Blackwell
Holland, 9 T. H. Lee
,, 113 Hernu. Peron & Co.
,, 9 M. Benschet
,, 10 R. W. Greeff & Co.
Germany, 400 H. Lambert
Belgium, 7 H. & G. Dutfield
,, 90 T. H. Lee
Holland, 12 A. & M. Zimmermann

Chlorine (Liquid)—
Germany, £30 A. & M. Zimmermann

Copper Sulphate—
U. States, 194 pks. Brandeis, Goldschmidt & Co.

Corrosive Sublimate—
Bombay, £25 H. S. King & Co.

Cream of Tartar—
Spain, 5 cks. W. C. Bacon & Co.
France, 2 pks. H Johnson & Sons
Portugal, 10 B. & F. Wf. Co.
France, 13 B. & F. Wf Co.
,, 5 M. Ashby, Ld.
,, 14 C. Atkins & Nisbet
,, 20 W. C. Bacon & Co.
,, 2 C. Christophersen & Co.
,, 40 Laughland, Mackay & Co

Dyestuffs—
Aniline
France, 3 pks. Gellatly, Hankey & Co
Cochineal
Canaries, 23 pks. W. M. Smith & Sons
,, 14 L. & I. D. Jt. Co.
,, 3 Sperling & Williams
Divi Divi
Madras, 256 pks. Flack, Chandler & Co.
B.W.I., 86 bgs. Perkins & Homer
Extracts
France, 1 ck. Prop. Hay's Wf.
,, 200 pks. Bennett S. S. Co.
,, 125 L. J. Levinstein & Sons
U. States, 10 Lindsay, Bird & Co.
,, 14 L. & I. D. Jt. Co.
,, 17 brls. Lorim r & Co.
Belgium, 5 pks. T. H. Lee
Germany, 55 bgs. Butler's Wf., Ld.
France, 52 cks. B. & F. Wf. Co.
Fustic
B.W.I., 34 t. G. T. Benton & Son
Gambier
Straits, 548 pks E. Boustead & Co.
,, 1,496 bls. Hoare, Wilson & Co.
Indigo
Madras, 23 chts. L. & I. D. Jt Co.
E. Indies, 20 Jules Kayseles & Co.
Holland, 2 brls. T. H. Lee
Logwood
B.W.I., 165 t. G. T. Benton & Son
,, 32 S. Dobree & Sons
,, 11 Toy, Morgan & Co.
Myrabolams
Bengal, 1,366 pks. Marshall & French
Bombay, 432 Dalton & Young
E. Indies, 1,366 bgs. W. Shelcott
,, 2,000 P. & O. Co.
Naphthaline
Germany, 28 cks. Fleming's Oil & Chem. Co.
Orchella
Germany, 18 bls. Anderson, Weber & Smith
,, 18 pks. W. A. Collins
Saffron
Spain, 1 pk. J. L. Lyon & Co.
,, 1 cs. Prop. Midd. Wf.
Germany, 1 pk. Beath, Schiess & Co.
Tanners' Bark
Germany, 202 t. J. Grieg
,, 99 Baxter & Hoare
N. Zealand, 20 G. H. Penney & Co.
Natal, 67 A. & W. Nesbitt
,, 54 Boutcher, Mortimore & Co
N. Zealand, 30 Von der Meden & Co
Turmeric
E. Indies, 346 bgs. L. & I. D. Jt. Co.
Valonia
Turkey, 206 t. Hicks, Nash & Co.
,, 70 Boutcher, Mortimore & Co.
,, 170 A. & W. Nesbitt
,, 25 Deering & Robottom

Farina—
Italy, 3,961 pks. C. Tennant, Sons & Co.
Holland, 150 J. Knill & Co.
Germany, 200 R. Bennett & Co.
Italy, 2,551 Wrightson & Son
Holland, 150 J. Barber & Co.

Glucose—
Germany, 105 pks. 860 c Bennett S. S. Co., Ld.
,, 6 48 J. Knill & Co.
,, 1,491 6,446 R. G. Hall & Co.
,, 150 900 E. & T. Pink
U. States, 1,500 1,500 E. Thompson & Co.

Glue—
U. States £155 Armour & Co.
Belgium, 80 T. Ronaldson & Co.
Germany, 1,200 Deering & Robottom
,, 161 Thames S. T. & L. Co.
Belgium, 970 J. Barber & Co.
France, 60 W. J. Davies & Sons
Germany, 75 L. & I. D. Jt. Co.
,, 72 M. D. Co.
U. States, 98 Anglo-American Oil Co.
Holland, 17 T. H. Lee

Glue Stock—
Belgium, 10 bls. Leach & Co.
,, 26 Hicks, Nash, & Co.
Germany, 26 ,,

Glycerine—
France, £310 H. Hill & Sons
Holland, 60 Phillipps & Graves

Guano—
Straits, 20 t. Huttenbach Brs.

Infusorial Earth—
Germany, £20 Invicta Asbestos Co., Ld.

Litharge—
Germany, 2 cks. H. Lambert
,, 8 J. Barber & Co.

Magnesia—
Holland, 1 cs. A. & M. Zimmermann

Manganese Ore—
Japan, 50 t. J. Swire & Sons

Manure—
Holland, 2 t. T. Palmer
Belgium, 253 Anglo-Contl. Guano Works
France, 270 ,,
Belgium, 8 Braschkauer & Co.
Portugal, 9 L. & I. D. Jt. Co.

Methyl Alcohol—
Sweden, 8 dms. Stein Brs.

Mica—
Canada, £10 H. E. Wald & Co.
E. Indies, 410 E. Davis & Co.

Molasses—
U. States, 88 brls. 513 c. C. S. Anderson
Germany, 1,450 7,980 J. R. Francis & Co.

Ochre—
France, 60 pks. W. Harrison & Co.
Germany, 10 cks. H. Lambert

Paraffin Scale—
U. States, 853 brls. Anglo-American Oil Co.

Paraffin Wax—
U. States, 450 brls. H. Hill & Sons

Phosphate Rock—
D.W.I., 795 t. G. M. Bauer
France, 115 A. Andrew & Co.
U. States, 2,585 Wyllie, Ward, & Co.

Pitch—
France, 96 cks. Poth, Hille, & Co.
N. Russia, 500 brls. Fellows, Morton, & Co
,, 260 J. D. Hewett & Co.
W. Indies, 249 Scholefield, Goodman, & Co.

Plumbago—
Ceylon, 323 cks. J. Swire & Sons
Germany, 23 J. Puddy & Co.
Ceylon, 112 J. Thredder, Son, & Co.
Italy, 10 bgs. J. L. Lyon & Co.
Holland, 14 brls. T. H. Holland

Potassium Bromide—
Germany, £22 R. W. Greeff & Co.

Potassium Carbonate—
Germany, 200 c. J. M. Steel & Co
,, 140 Petri Brs.
,, 100 H. Lambert
France, 100 W. E. Cole

Potassium Muriate—
Germany, 120 pks. Bessler, Waechter, & Co.

Potassium Oxychloride—
Sweden, £225 G. Boor & Co.

Potassium Permanganate—
Germany, £60 R. W. Greeff & Co.
,, 12 pks. Butler's Wf., Ld.

Rosin—
U. States, 4,500 brls. Prod. Brokers' Co.

Rosin Oil—
France, 30 brls. Barratt, Tagant, & Co.
Germany, 4 H. Hunt

Salicylic Acid—
Germany, 43 pks. Butler's Wf., Ld.

Saltpetre—
E. Indies, 1,954 bgs. Lucas & Spencer's Wf.
Germany, 76 cks. P. Hecker & Co.
Holland, 50 ,,
Germany, 16 L. & I. D. Jt. Co.

Soap—
U. States, £702 E. Fellingham
,, 195 Lunham & Moore
,, 750 W. Desson
Holland, 118 Phillipps & Graves
——, 30 C. S. Johnstone
N. Zealand, 150 L. & I. D. Jt. Co.

Soda—
U. States, 2,500 c. F. Fink & Co.

Sodium Bicarbonate—
Holland, 20 cs. A. & M. Zimmermann

Sodium Nitrate—
Chili, 14,893 bgs. W. Montgomery & Co.

Sodium Prussiate—
Belgium, 190 c. Blagden, Waugh, & Co.

Sodium Sulphate—
Holland, 100 c. R. W. Greeff & Co.

Starch—
Belgium, 455 pks. T. H. Lee
,, 40 C. Tennant, Sons, & Co.
Germany, 41 Phillipps & Graves
Belgium, 80 Becker & Wagner
,, 80 cs. ,,
Holland, 1,566 pks. Little & Johnston
,, 80 Phillipps & Graves
Rangoon, 1,300 J. Forsey
,, 250 R. Bennett & Co.
Belgium, 60 Leach & Co.
France, 20 W. E. Cole

Stearine—
Belgium, 125 bgs. H. Hill & Sons
France, 131 ,,

Sulphur—
Spain, 100 t. J. Forster

Sulphurous Acid—
Holland, 5 pks. H. Lorenz
,, 10 Perkins & Homer

Superphosphates—
Belgium, 50 t. Chemical Works

Talc—
France, £80 Blackwell & Co.
E. Indies, 80 Hall & Son

Tallow—
Sydney, 144 cks. Phillipps & Graves
,, 60 Cuthbert & Hall
Germany, 5 T. Oertell
N. Zealand, 222 N. Z. L. & M. A. Co.
,, 200 Col. Consign. Co.
,, 2 Culverwell, Brook-, & Co.
,, 72 Flack, Chandler, & Co.
,, 4 Hoare, Wilson, & Co.
,, 10 Phillipps & Graves
,, 82 J. Graves
Belgium, 25 Sawer, Sons, & Co.
Sydney, 23 Aust. Meat. Co.
Holland, 42 Phillipps & Graves
U. States, 12 B. Tucker & Co.
China, 10 cs. L. & I. D. Jt. Co.

Tar—
N. Russia, 2 brls. D. Smith

Germany, 100 W. Beard & Son
" 150 cks. Linck, Moeller, & Co.
U. States, 1,250 brls. Union Whvs. Co.
Germany, 20 Mwll Dk. Co.

Tar Oil—
Holland, 88 cks. Page, Son, & East

Tartaric Acid—
Holland, 22 pks. B. & F. Wf Co.
" 4 Kirkpatrick, Barr, & Co.
" 6 F. C. Devon & Co.

Ultramarine—
Belgium 20 pks. J. Harrison
Holland, 1 Becker & Wagner
" 10 J. Barber & Co.
" 4 D Storer & Sons
" 2 cs. Phillipps & Graves

Varnish—
U. States, 30 pks. Williams, Torrey, & Co.
" 28 P. M. Johnson & Co.
Germany, 8 Phillipps & Graves
" 230 Butler's Wf., Ld.

White Lead—
Belgium, 22 pks. T. & W. Farmiloe, Ld.
France, 16 J. Watt & Son
Germany, 50 Burrell & Co.
" 41 Taylor Brs.
Belgium, 50 J. L. Lyon & Co.
Spain, 8 cks. "
Germany, 51 Perkins & Homer
Holland, 54 pks. A. & M. Zimmermann
" 61 Burrell & Co.

Wood Pulp—
Sweden, 320 pks. Alsing & Co., Ld
" 240 G. Hagborg & Co.
Norway, 368 London Paper Mills Co.
Sweden, 250 Horne & Co.
" 500 Page, Son, & East
Portugal, 250 "
Holland, 130 Thames S. T. & L. Co., Ld.
Sweden, 250 H. Roby & Mather
" 80 W. G. Taylor & Co. Ld.
Germany, 93 L. & I. D. Jt. Co.
" 150 Tough & Henderson
Sweden, 188 "
" 400 Ekman Pulp & Paper Co.
Germany, 510 E. J. & W. Goldsmith
Norway, 40 W. D. Cork
Canada, 605 J. Dards
" 2,460 G. Becker & Co.
N. Russia, 131 Spicer & Son
Sweden, 30 Christophersen, Andrews, & Co.
Norway, 320 "

Zinc Oxide—
Belgium, 8 pks T. Ronaldson & Co.
Holland, 201 M. Ashby, Ld.
Germany, 300 "
Holland, 118 J. Matton
Germany, 500 Soundy & Sons
Holland, 40 cks. A. Zumbeck & Co.

LIVERPOOL.

Week ending June 30th.

Alum—
Rotterdam, 10 brls.

Alumina Sulphate—
Antwerp, 26 cks.

Ammonia—
Antwerp, 6 cks.

Antimony Salts—
Hamburg, 1 ck.

Arsenic—
Rio de Janeiro, 25 brls. W. B. Arkle

Asbestos—
Norfolk, 236 bgs.

Barytes—
Bremen, 19 cks.

Bitumen—
Marseilles, 4 brls. National Asphalt Co.

Bone Ash—
River Plate, 337 bgs.

Bones—
Alexandria, 114 t.

Borax—
Mollendo, 1,056 sks.

Caoutchouc—
Havre, 210 bgs.

Castor Oil—
Marseilles, 84 cks. 206 brls. 13 cs.

Ceresin Wax—
Hamburg, 6 cs.

Colours—
Antwerp, 32 kgs.
Rotterdam, 162 cks. 1 cs. 3 pks.

Cream of Tartar—
Barcelona, 5 cks.
Oporto, 10

Dyestuffs—
Extracts
Colon, 50 cs. D. Midgley & Son
Hamburg, 8
Philadelphia, 200 bxs.
Antwerp, 20 brls.
Bombay, 50 cks.
Logwood
Puerto Plata, 25 t.
Belize, 252
Myrabolams
Bombay, 700 pockets
Quallai Bark
Valparaiso, 120 bls. H. Watson & Co.
" 315
Shumac
Barcelona, 100 bgs.
Marseilles, 52 sks.

Dyestuffs *(otherwise undes.)*—
Nantes, 750 cks. R. J. Francis & Co.
N. Orleans, 11 bgs. Edwards Brs.
Norfolk, 10 bdls.

Gelatine—
Bordeaux, 5 bgs.

Glucose—
New York, 100 brls.
Norfolk, 2,900
New York, 700 L. Sutro & Co.

Glue—
Boston, 38 pks. Richards & Ward
Marseilles, 4 cs. 20 sks.
Havre, 10 bls.
Rotterdam, 200 bgs.

Glycerine—
Marseilles, 6 dms.

Manganese Ore—
Coquimbo, 940 t.

Molasses—
N. Orleans, 1,000 brls. A. B. Booth

Ochre—
Marseilles, 19 cks. J. L. Lyons & Co.
" 89 132 bls.

Paint—
New York, 6 brls. 1 cs. Laing Wharton & Co.

Paraffin Scale—
Baltimore, 100 brls.

Phosphate Rock—
Bona, 2,102 t.

Potash—
Bordeaux, 1 cs.
Hamburg, 80 cks.
Antwerp, 4
Rotterdam, 74

Potassium Chlorate—
Marseilles, 9 brls. Bryce & Rumpff

Rosin—
Brunswick, Ga., 4,413 brls.
Bayonne, 2,318

Rosin Oil—
Rotterdam, 25 brls.

Saltpetre—
Hamburg, 25 kgs.

Silver Sulphate—
Vera Cruz, 9 cs. Elliot's Metal Co.

Soap—
Newport News, 965 brls.
Marseilles, 1 cs. M. Bell & Co.
" 450 bxs.
Norfolk, 500 brls.
N. Orleans, 2,430
New York, 250
Hamburg, 16 cs.

Soapstone—
Bordeaux, 100 bgs. Geo. G. Blackwell, Sons & Co.

Sodium Chlorate—
Marseilles, 9 brls. Boyce & Rumpff

Starch—
New York, 200 bgs. L. Sutro & Co.
" 210 J. Bartel & Co.
Boston, 100 "
Montreal, 1,593 F. W. Simond & Sons
Baltimore, 600
Antwerp, 1,620 cs.
" 180 J. T. Fletcher & Co.
Rotterdam, 179
Philadelphia, 110 brls. J. Howard & Co.

Stearine—
Antwerp, 22 bgs.

Tallow—
New York, 200 tcs. 121 brls. 200 hds.
Norfolk, 192
Philadelphia, 200

Tartaric Acid—
Montreal, 10 cks.
Hamburg, 1

Turpentine—
Savannah, 3 304 brls.

Varnish—
New York, 1 bx. 16 brls. W. A. Warren
" 20

Wood Pulp—
Oporto, 1,090 bls.

Zinc Ashes—
Philadelphia, 59 brls.

Zinc Oxide—
Antwerp, 40 cks.

MANCHESTER.

Week ending July 2nd.

Acetate of Lime—
New York, 1,609 bgs.

Alumina Sulphate—
Ghent, 101 bgs. 1 brl.

Ammonia—
Rotterdam, 40 cyldrs.

Aniline Salts—
Rotterdam, 4 cks.

Asbestos—
Montreal, 600 bgs.

Barytes—
Antwerp, 160 bgs.
Rotterdam, 100, 27 cks.

Cement—
Antwerp, 500 bgs.

Ceresin Wax—
Hamburg, 15 cs.

Chemicals *(otherwise unaescribed)*
Rotterdam, 1 ck.

Colours—
Antwerp, 3 cks.
Rotterdam, 99, 39, 13 pks. 61 brls.

Dyestuffs—
Alizarine
Rouen, 38 cks.
Extracts
Hamburg, 1 brl.
New York, 105 bxs. 25
Rotterdam, 8 cks.

Farina—
Hamburg, 50 bgs.
Stettin, 350 Browne, Geveke, & Co.
" 410

Felspar—
Stockholm, 150 t. Anderton Co.

Glucose—
Montreal, 600 brls.
Stettin, 250 cks.

Glue—
Antwerp, 32 bls.
Rotterdam, 110 bgs. 26 cs.

Limestone—
Antwerp, 2 crts. J. T. Fletcher & Co.
" 8 cs.

Litharge—
Rotterdam, 26 cks.

Lithopone—
Hamburg, 28 cks.

Ochre—
Hamburg, 5 cks.

Oxalic Acid—
Stettin, 25 cks.

Paint—
Hamburg, qty.

Potash—
Rotterdam, 3 cks.

Potash Lye—
Hamburg, 32 dms.

Potassium Prussiate—
Hamburg, 14 cks.

Pumice Stone—
Rotterdam, 10 cs.

Pyrites—
Huelva, 1,971 t.

Soda—
Gothenburg, 16 cks.

Sodium Nitrate—
Rotterdam, 4 cks.

Sodium Sulphide—
Rotterdam, 30 cks.

Starch—
Antwerp, 485 cs.
Montreal, 4,501 bgs.
Rotterdam, 146

Sulphuric Acid—
Rotterdam, 10 cks.

Tannic Acid—
Hamburg, 1 ck.

Tannin—
Antwerp, 3 cks.

Tallow—
New York, 50 hds.

Tartaric Acid—
Rotterdam, 10 kgs. 4 cks.

Tin Oxalate—
Rotterdam, 12 brls.

Tin Oxide—
Rotterdam, 1 ck.

Varnish—
Hamburg, 1 ck.

Wood Pulp—
Chicoutini, 17,931 brls.
Gothenburg, 1,840 bls. 1,138 pks.
Hamburg, 400
Stettin, 3 cs.

Zinc Ashes—
Rotterdam, 34 cks.

Zinc Oxide—
Antwerp, 32 brls.
Rotterdam, 50

Zinc White—
Rotterdam, 5 cks.

GLASGOW.

Week ending July 7th.

Acetate of Lime—
Philadelphia, 300 bgs.

Acids—
Rouen, 12 cks.

Alkali—
Rotterdam, 4 cks. J. Rankine & Son

Barium Sulphate—
Antwerp, 250 bgs.

Bitumen—
Marseilles, 4 cks.

Castor Oil—
Marseilles, 6 cks. 154 brls. 15 cs.
Antwerp, 27

Chemicals *(otherwise undescribed)*
Rotterdam, 9 cks. J. Rankine & Son

Colours—
Hamburg, 4 cks. 1 cs.
Rotterdam, 41 pks. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 25 cks. J. Rankine
97 brls. & Son
Aniline
Rotterdam, 10 cks. J. Rankine
10 bols. 5 brls. 6 cs. & Son
Aniline Colours
Hamburg, 32 cks. 4 cs
Extracts
Marseilles, 150 brls.
Antwerp, 19 cks.
Rouen, 4
Madder
Rotterdam, 1 ck. J. Rankine
1 prcl. & Son
Shumac
Marseilles, 50 bgs.
Palermo, 300

Farina—
Delfszyhl, 75 bgs. J. Rankine & Son

Glue—
Rotterdam, 20 bgs. J. Rankine & Son
Antwerp, 7 bols. 2 bls.
Hamburg, 3 cks.

Methyl Alcohol—
Antwerp, 1 dm.

Ochre—
Marseilles, 39 cks. 132 brls.
Rotterdam, 13 J. Rankine & Son

Mazaron, 97 t. St. Govan Mineral Co.

Paint—
Genoa, 21 tins.

Painters' Colours—
Antwerp, 6 cks.

Plumbago—
Genoa, 18 bgs.

Potash—
Rotterdam, 176 cks. J. Rankine & Son
Hamburg, 53

Potassium Chlorate—
Marseilles, 9 brls.

Pumice Stone—
Messina, 20 bgs.

Rosin—
Rotterdam, 7 cks. J. Rankine & Son

Soap—
Rotterdam 2 cs. J. Rankine & Son

Soda—
Genoa, 20 brls.

Sodium Chlorate—
Marseilles, 9 brls.

Starch—
Rotterdam, 40 cs. J. Rankine & Son
Antwerp, 170

Stearine—
St. John's, N'fd., 9 cks.

Tallow—
Philadelphia, 180 brls.

Waste Salt—
Hamburg, 1,000 bgs.

White Lead—
Rotterdam, 90 pks. J. Rankine & Son

Wood Pulp—
Christiania, 1,719 bls.

Zinc Ashes—
Genoa, 2 brls.

Zinc White—
Rotterdam, 25 pks. J. Rankine & Son

HULL.

Week ending June 2nd.

Barytes—
Bremen, 23 cks. Veltmann & Co.
" 150
" 40 G. Holmes & Co.
Hamburg, 11 Bailey & Leetham, Ld.
" 2 bgs.
Rotterdam, 62 cks. Hutchinson & Son
Stettin, 54

Ceresin Wax—
Stettin, 24 bgs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Antwerp, 92 pks. Wilson, Sons, & Co., Ld.
New York, 62 cyldrs. "

China Clay—
Hamburg, 102 cks. Wilson, Sons, & Co., Ld.

Colours—
Antwerp, 40 cs., 11 pks., 137 cks. Wilson, Sons, & Co., Ld.
Bremen, 1 cs. J. Pyefinch & Co.
Ghent, 5 brls. Wilson, Sons, & Co., Ld.
Hamburg, 6 cs. "
Rotterdam, 29 cks., 70 pks., 20 cs. W. & C. L. Ringrose
" 1
" 67 pks., 20 cks. Hutchinson & Son
" 19 pks. Wilson, Sons, & Co., Ld.

Cottonseed Oil—
New York, 100 brls. Wilson, Sons, & Co., Ld.

Cream of Tartar—
Rotterdam, 2 cks. Hutchinson & Son

Dextrine—
Stettin, 50 bgs. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 30 cks., 14 pks. Hutchinson & Son
Mimosa Bark
Hamburg, 278 bgs. Wilson, Sons, & Co., Ld.
Naphthaline
Antwerp, 12 cks. Wilson, Sons, & Co., Ld.

Dyestuffs *(otherwise undes.)—*
Rotterdam, 9 cks. Hutchinson & Son

Farina—
Harlingen, 100 bls. Hutchinson & Son

Glucose—
New York, 650 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 40 bgs., 40 bls. Hutchinson & Son

Glue—
Antwerp, 40 bgs. Wilson, Sons, & Co., Ld.
Dunkirk, 52 cks. "
Hamburg, 2 "
" 13 pks. Sommerfield & Mead
Stettin, 20 bgs. Wilson, Sons, & Co., Ld.

Nickel Salt—
Rotterdam, 1 ck. Hutchinson & Son

Ochre—
Bremen, 8 cks. Blundell, Spence, & Co.

Paraffin Wax—
Hamburg, 15 bgs. Wilson, Sons, & Co., Ld.
New York, 300 "

Phosphates—
Bona, 1,450 t.
Dunkirk, 10 bgs. Wilson, Sons, & Co., Ld.

Phosphorus—
Rotterdam, 1 cs. T. F. Bell & Co.

Potash—
Antwerp, 1 dm. Wilson, Sons, & Co., Ld.
Dunkirk, 32, 8 pks. "

Potassium Oxalate—
Rotterdam, 3 cks. Hutchinson & Son

Rosin—
Hamburg, 1 ck. Wilson, Sons, & Co., Ld.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.

Soap—
Boston, 168 brls. Wilson, Sons, & Co., Ld.
New York, 81 cs. "

Soda—
Antwerp, 200 bgs. Wilson, Sons, & Co., Ld.
Ghent, 240 "

Starch—
Antwerp, 253 cs. Wilson, Sons, & Co., Ld.
Bremen, 3,334 Veltmann & Co.
Ghent, 315 cs. Wilson, Sons, & Co., Ld.

Stearine—
New York, 25 tcs. Wilson, Sons, & Co., Ld.

Tallow—
Boston, 225 tcs. Wilson, Sons, & Co., Ld.
Dunkirk, 135 cks. "
Hamburg, 26 tcs. "
New York. 90 "

Tartaric Acid—
Rotterdam, 14 cks. Hutchinson & Son

Turpentine—
Libau, 50 brls.

Ultramarine—
Rotterdam, 4 cks. W. & C. L. Ringrose
" 3 pks. Hutchinson
" 1 cs. & Son

Varnish—
Antwerp, 2 cs Wilson, Sons, & Co., Ld.

White Lead—
Amsterdam, 13 cks. Hutchinson & Son
Ghent, 30 Wilson, Sons, & Co., Ld.
Rotterdam, 20 Hutchinson & Son

Wood Pulp—
Bergen, 77 pks. Wilson, Sons, & Co., Ld.
" 143 Pedersen & Co.
Christiania, 1,536 bls. Wilson, Sons, &Co., Ld.
Gothenburg, 86, 400 pks. "
" 35 bls. W. Shipstone & Co.
Helsingfors, 82 J. Good & Sons
" 144

Zinc White—
Rotterdam, 2 cks. Hutchinson & Son

TYNE.

Week ending July 2nd.

Barytes—
Antwerp, 300 bgs. Tyne S. S. Co.
Rotterdam, 150, 103 cks. "

Colours—
Antwerp, 3 cks. Tyne S. S. Co.
Hamburg, 1 cs. "
Rotterdam, 2 cks. "

Dyestuffs *(otherwise undescribed)*
Antwerp, 539 bgs. Tyne S. S. Co.

Glucose—
New York, 400 brls. J. Cook & Co.

Limestone—
Antwerp, 9 crts. Tyne S. S. Co.

Pumice Stone—
Amsterdam, 14 bgs Wm. Swanston & Sons

Pyrites—
Huelva, 2,978 t. Tharsis Sulphur & Copper Co.

Salt—
Harburg, 250 t. Clephans & Wiencke

Soap—
Rotterdam, 6 cs. Tyne S. S. Co.

Starch—
Antwerp, 40 cs. Tyne S. S. Co.
Rotterdam, 92 cks. "

Wood Pulp—
Christiania, 20 cs.
Gothenburg, 31 bls.

GOOLE.

Week ending June 29th.

Alizarine—
Rotterdam, 34 cks. 1 cs.

Alkali—
Calais, 6 cks.

Aniline—
Rotterdam, 40 cks. 9 cs.

Barytes—
Antwerp, 60 bgs.

Caoutchouc—
Boulogne, 20 cks. 2 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 5 cks. 5 cs.

Colours—
Hamburg, 8 cks. 2 cs.
Rotterdam, 14

Dyestuffs *(otherwise undescribed)*
Antwerp, 130 bgs.
Amsterdam, 1 ck.
Boulogne, 121 23 cs. 114 pks.
Rotterdam, 169 28 2

Farina—
Delfszyhl, 770 bgs.
Hamburg, 302

Glucose—
Hamburg, 24 cks.

Glue—
Boulogne, 1 hhd.

Glycerine—
Hamburg, 4 dms.

Potash—
Calais, 9 dms.
Dunkirk, 2 cks. 80

Potassium Carbonate—
Hamburg, 10 cks.

Potassium Muriate—
Antwerp, 50 bgs.

Saltpetre—
Hamburg 3 cks.

Starch—
Ghent, 20 cs.

Tartaric Acid—
Rotterdam, 2 cks.

Waste Salt—
Hamburg, 550 cks.

Wood Pulp—
Gothenburg, 240 t.

GRIMSBY.

Week ending July 2nd.

Albumen—
Hamburg, 7 cs.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 3
Rotterdam, 2

Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 1 cs.

Colours—
Antwerp, 1 ck. 21 cs. 30 pks.
Hamburg, 73 12 88
Rotterdam, 19 bgs., 2 cks.

Dyestuffs *(otherwise undescribed)*
Antwerp, 600 bgs.

Farina—
Hamburg, 50 bgs.

Starch—
Antwerp, 9 cs.
Hamburg, 80
Rotterdam, 30

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 6th.

Acids—
Colombo, 3 cs. £15
Cologne, 24 cks. 100

Alkali—
Auckland, 5 t. 9 c. £48
E. London, 1 3 10
Timaru, 1 8

Alum Waste—
Calcutta, 40 t. 10 c. £98

Ammonia—
Pt. Elizabeth, 10 cs. £15

Ammonium Carbonate—
Rouen, 5 t. 9 c. £130
Stettin, 1 13 40
Dunkirk, 2 5
Paris, 1 28

Ammonium Chloride—
Samsoun, 1 t. £32

Ammonium Sulphate—
Canaria, 24 t. £225
Colombo, 9 5 c. 92
Trinidad, 30 11 263
Hamburg, 330 2,775
Dunkirk, 12 5 118
Bremen, 60 570
Stettin, 215 13 1,938
Rouen, 25 8 220
Amsterdam, 530 5,035
Cologne, 100 925

Arsenic—
Wellington, 2 t. £42
Hiogo, 1 20
Amsterdam, 6 cks. 24
Napier, 60 dms. 60

Bisulphite of Lime—
Bombay, 3 t. 3 c. £42

Bleaching Powder—
E. London, 1 t. 1 c. £13

Borax—
Antwerp, 5 cs. £13
Pt. Elizabeth, 2 t. 4 c. 28
Melbourne, 1 14

Caustic Potash—
Sydney, 10 c. £12
E. London, 1 t. 18 6

Caustic Soda—
Cape Town, 5 c. £6
Melbourne, 1 t. 4 32
Vera Cruz, 4 7 36
Wellington, 13 30
Auckland, 15 14 196
Hobart, 2 2 17

Chemicals *(otherwise undescribed)*
Rotterdam, 4 cks. 31 kgs. £275
Colombo, 16 cs. 34
Vera Cruz, 3 18
Madras, 6 27 pks. 78
Cape Town, 1 12
Lisbon, 1 12
Zanzibar, 2 12
Cologne, 5 kgs. 29
Hamburg, 15 89
Wellington, 55 53
Auckland, 4 78 184
Melbourne, 56 15
Calcutta, 24 52
Durban, 5 cs. 27
Karachi, 2 12
Timaru, 16 250 dms. 162
Hiogo, 20 kgs. 79
Genoa, 20 111
San Francisco, 30 57
Dunedin, 31 10 65
Amsterdam, 3 17

Citric Acid—
Pt. Elizabeth, 5 c. £37
Hobart, 4 24
Amsterdam, 2 kgs. 12
St. Petersburg, 2 t. 13 374
Colombo, 2 14
Bombay, 3 21
Brisbane, 3 21
Sydney, 16 cks. 93
Cape Town, 3 17
Hamburg, 10 55
Durban, 1 16

Coal Products—
Alizarine
Boston, 25 cks. £295
Lyttelton, 9 150
Aniline Oil
New York, 15 dms. £420
Genoa, 10 275
Anthracene
Rotterdam, 446 cks. £1,388
Cologne, 285 640
Carbolic Acid
Boston, 120 cks. £959
Antwerp, 8 18
Marseilles, 10 25
Sydney, 10 dms. 9
Hobart, 7 pks. 11
Calcutta, 20 6
Cologne, 48 200
Hiogo, 30 88
Ludwigsbafen, 67 230
Dyes
Odessa, 5 kgs. £133
Naphthaline
Sydney, 10 cks. £20
New York, 132 110
Paris, 11 379 bgs. 220
Calcutta, 20 kgs. 13
Bordeaux, 13 52 45
Pitch
Antwerp, 2,609 t. £2,102
Hochfeld, 140 130
Hong Kong, 867 cks. 182
Dusseldorf, 56 brls. 123
Montreal, 400 118
Mauritius, 210 53
St. John's, N.B., 100 23
Boston, 100 60
Tar
Trinidad, 20 pks. £12
Sydney, 20 brls. 300 dms. 73
Adelaide, 5 cks. 7
Durban, 20 328 375 71
Dunedin, 16 6
Pt. Elizabeth, 200 28
Delagoa Bay, 200 24
Tar Oil
Melbourne, 20 dms. 10 rnlts. £24

Copper Sulphate—
Paris, 25 t. £409
Ghent, 25 409
Sydney, 5 79
Antwerp, 5 1 c. 75

Cream of Tartar—
Canterbury, 5 c. £18
Wellington, 1 t. 7 135
Fremantle, 3 11
Sydney, 1 73
Hiogo, 1 82

Disinfectants—
Durban, 120 cks. £37
Montreal, 44 pks. 77
Hong Kong, 8 cs. 28
Calcutta, 21 2,075 dms. 298
Pt. Elizabeth, 40 14

Glycerine—
New York, 49 t. 14 c. £1,090

Manure—
Los Angeles, 11 t. £59
Demerara, 20 4 c. 160
Wellington, 250 820
Canaria, 10 10 21
Riga, 200 510
Durban, 84 1,080
Madras, 1 10
Colombo, 25 200
Timaru, 550 1,474

Oxalic Acid—
Rouen, 12 cks. £105

Phosphates—
Durban, 60 t. £120

Phosphorus—
B. Ayres, 10 cs. £91

Potash—
San Francisco, 1 t. 1 c. £114
Paris, 2 12

Potash Salts—
Auckland, 2 t. 10 c. £185

Potassium Cyanide—
Melbourne, 5 t. 1 c. £620
Fremantle, 10 3 1,217
Sydney, 8 942
Madras, 14 75
Delagoa Bay, 38 cs. 382
Normanton, 1 126

Potassium Permanganate—
Calcutta, 3 cks. £14

Potassium Prussiate—
Montreal, 13 cks. £290

Salicylic Acid—
Toronto, 5 cs. £42

Saltpetre—
Sydney, 2 t. £43
Pt. Elizabeth, 1 20 cs. 31
Bahia, 3 9 c. 112
Cape Town, 13 12
Durban, 12 11

Sheep Dip—
Durban, 1 t. 9 c. £60
New York, 2 4 18

Soap Leye—
Rotterdam, 42 t. 18 c. £951

Soda—
Auckland, 11 t. 5 c. £96
Rotterdam, 5 9 30

Soda Ash—
Oamaru, 6 cks. £20

Soda Crystals—
Pt. Elizabeth, 13 t. £42

Sodium Bicarbonate—
Pt. Elizabeth, 4 t. £34
Madras, 6 c. 9
Hobart, 2 2 19

Sodium Bisulphate—
Lyttelton, 3 t. 10 c. £26

Sodium Carbonate—
Pt. Elizabeth, 1 t. 12 c. £10

Sodium Hyposulphite—
Vera Cruz, 10 t. £49

Sodium Nitrate—
Colombo, 2 t. £19

Sodium Potassium Tartrate—
Brisbane, 2 c. £10

Sodium Silicate—
Vera Cruz, 1 t. 17 c. £7
Hobart, 6 6 19

Sodium Sulphate—
Gothenburg, 280 t. £420

Sulphur—
Cape Town, 11 t. 3 c. £100
E. London, 8 7 83
Pt. Elizabeth, 5 38
Colombo, 1 8
B. Ayres, 1 7

Sulphuric Acid—
Santos, 18 c. £17
Madras, 2 t. 14 cs. 22
New York, 14 10
Trincomalee, 3 14 20
Durban, 16 118

Superphosphates –
Canaria, 12 t. 10 c. £41

Tartaric Acid—
Rouen, 10 c. £58
Montreal, 15 87
Bombay, 2 11
Boulogne, 1 cs. 29
Fremantle, qty. 58
St. Petersburg, 3 19

LIVERPOOL.

Week ending July 6th.

Acetic Acid—
Vera Cruz, 1 t. 5 c. 2 q. £17

Alum—
M. Video, 6 t. 2 c. £30
Sydney, 1 2 3 q. 6
Ibrail, 6 30
Rio G. Do Sul, 3 15
Volo, 1 10 7
Lisbon, 5 16 2 28

Alumina—
Vera Cruz, 5 c. £7

Alumina Sulphate—
Boston, 25 cks. £26

Ammonia—
Rio de Janeiro, 11 c. 1 q. £10

Ammonium Carbonate—
Rotterdam, 5 c. £7
Amsterdam, 6 7
Valparaiso, 1 t. 5 36
Barcelona, 18 27
Yokohama, 2 10 70
Fiume, 1 25
Nantes, 1 6 43

Ammonium Chloride—
Ghent, 6 c. £11
Galatz, 1 t. 6 47
Smyrna, 1 33
New York, 27 17 573
Ibrail, 1 33
Rotterdam, 5 2 76
Kobe, 1 5 23

Ammonium Sulphate—
Valencia, 75 t. 5 c. £662
Nantes, 5 4 52
Las Palmas, 22 17 216
Malaga, 101 5 930
Bremerhaven, 222 10 2,060
La Pallice, 100 900
St. Nazaire, 20 180
Palermo, 9 17 3 q. 99
Ghent, 30 9 268

Ammonium Vanadiate—
Vera Cruz, 1 cs. £6

Arsenic—
Conakry, 4 c. 2 q. £10

Basic Slag—
Nantes, 150 t. £225
Jersey, 5 31
Bordeaux, 50 75

Bleaching Powder—
Aleppo, 8 brls.
Baltimore, 55 cks.
Boston, 300
Genoa, 124
Ghent, 75
Leghorn, 78
Naples, 7
Newport News, 33
New York 428 25 bls.
Philadelphia, 151
Rio de Janeiro, 17
Rotterdam, 29
Rouen, 9
San Sebastian, 28
Syra, 3
Vera Cruz, 20

Boracic Acid—
Odessa, 10 c. £16

Borax—
Melbourne, 3 t. £37
Ghent, 1 15
Callao, 12 c. 9
Montreal, 10 15 1 q. 162
Cape Town, 10 7
Ibrail, 1 1 13
Trieste, 1 8 23
Brisbane, 10 8
Rotterdam, 11 9
B. Ayres, 6 10 104

Calcium Chloride—
Brisbane, 3 t. £7
Maranham, 1 1 c 3
Melbourne, 14 6 32
New York, 20 5 38
Havre, 7 1 16

Carbolic Acid—
Philadelphia, 19 t. 8 c. £340
New York, 4 7 2 q. 234
Wellington, N.Z., 7 3 21
Yokohama, 2 10 153

Caustic Potash—
Montreal, 4 t. 9 c. £86

Caustic Soda—
Ancona, 40 dms.
Amsterdam, 94
Bahia, 415
Barcelona, 130
Bari, 15
Barranquilla 37
Bombay, 100
Bremen, 5 brls.
Brisbane, 50
B. Ayres, 9 cks.
Calcutta, 20
Callao, 320
Christiania, 5
Colombo, 10
Copenhagen, 150
Coquimbo, 16
E. London, 7 cs.
Galatz, 43
Genoa, 235
Hamburg, 35
Leghorn, 65
London, 30
Malaga, 10
Melbourne, 13 17 pks.
Messina, 100
M. Video, 150
Montreal, 100
Morester, 3
Nantes, 240
Naples, 34
New York, 225
Oporto, 15
Pernambuco, 174 cks.
Philadelphia, 200
Porto Alegre, 100
Providence, R.G. 100
Puerto Cabello, 20
Rio de Janeiro, 38
Rio Grande, 70
Rotterdam, 118
Rouen, 14
St. Petersburg, 1
Samarang, 150
Santos, 60
San Sebastian, 39
Sao Paulo, 40
Sourabaya, 20
Sydney, 86 12 rls.
Talcahuano, 30
Tolendo, 35
Toronto, 100
Trieste, 92
Valparaiso, 25 50 kgs.
Volo, 10
Woodstock, 20

Chemicals *(otherwise undescribed)*
Limassol, 1 ck. £6
Barcelona, 1 t. 4 c. 40
Antwerp, 1 10 49
Rio de Janeiro, 2 8 1 q. 22
Christiania, 11 3 9
Cape Town, 5 4
Melbourne, 1 14
Rotterdam, 2 17 3 40
Calcutta, 15 10 47
New York. 1 12 1 51
Philadelphia, 13 16 358

China Clay—
Lisbon, 20 t.
Maranham, 6
Boston, 1,234 cks.
New York, 100
Philadelphia, 400
Rio de Janeiro, 174
Vera Cruz, 50

Citric Acid—
Santos, 5 c. 2 q. £42

Coal Products—
Aniline Oil
Barcelona, 10 cks. 10 brls.
Aniline Salts
Boston, 71 cs. 5 dms.
Creosote
Lisbon, 250 brls.
Creosote Salts
Bordeaux, 40 t. 18 c. 1 q. £66
Naphthol
Barcelona, 4 cks.
Pitch
Antwerp, 79 t. 11 c.
Bilbao, 40 brls.
Nantes, 184
Talcahuano, 25
Tar
Pernambuco, 20 cks.
Talcahuano, 25 brls.

Copperas –
M. Video, 3 t. £6

Copper Sulphate—
Christiania, 2 t. 16 c. 3 q. £46
M. Video, 6 12 113
Bari, 19 19 3 317
Konigsberg, 5 19 2 94
Ghent, 14 9 2 227
Antwerp, 2 10 40
Genoa, 16 18 2 273
Constantinople, 1 7 22
New York, 18 3 14
Nantes, 41 1 1 680
Rio de Janeiro, 5 1 5
Cape Town, 1 16
Galatz, 10 8
Varna, 1 16
Ibrail, 1 1 16
Venice, 8 129
Samarang, 1 1 2 17
B. Ayres, 3 2 59

Braila, 2 32
Bordeaux, 197 12 2 3,111
Cette, 205 2 3,217

Disinfectants—
Rangoon, 15 c. £40
New York, 2 1 q. 5
Pt. Said, 2 6

Dried Blood—
Gd. Canary, 10 t. £71
Nantes, 5 2 c. 2 q. 36
Alicante, 1 7

Dyestuffs—
Aniline Colours
Calcutta, 3 cs.
New York, { 52 cks. 28 dms. / 3 kgs. 2 bxs.
Extracts
Boston, 50 cs.
Logwood
Alexandria, 100 bgs.

Glycerine—
Callao, 1 t. £52
Rotterdam, 27 17 c. 761
New York, 30 4 1 q. 916
Calcutta, 2 5 173
Piræus, 1 7 21
Quebec, 1 50

Gypsum—
St. Petersburg, 4 t. 5 c. 2 q. £13

Hydrochloric Acid—
Callao, 1 cs.

Magnesia—
Bilbao, 20 cs.
Constantinople, 3 cks.
Tampico, 15
Vera Cruz, 16

Magnesium Chloride—
Rangoon, 1 t. 7 c. £6
Rouen, 20 dms.

Magnesium Sulphate—
Lisbon, 43 bgs.
New York, 10 bls.

Manure—
Nantes, 5 t. 1 q. £29
Las Palmas, 20 10 138

Oxalic Acid—
Philadelphia, 7 t. 9 c. £195

Paint—
Algoa Bay, 1 cs.
Antwerp, 14 kgs. 28 pks.
Baltimore, 20 cks.
Batavia, 25
Bordeaux, 8
Brass, 3 dms.
Calcutta, 120 32 pks. 7
Callao, 14 25 cs.
Cape Town, 2
Constantinople, 50 83
Dunedin, 60
Gibraltar, 162
Gd. Bassam, 40
Iquique, 8 cks.
Madrid, 5 bxs.
Malta, 180
Manaos, 3
Melbourne, 6 kgs. 5
Nassau, 3
Pernambuco, 1
Rio de Janeiro, 2
Rosario, 3
St. John's, Nfd., 2
St. Thomas, 105 10 dms.
San Sebastian, 4
Sierra Leone, 24 40 pks.
Singapore, 1,031 43 cs.
Smyrna, 40
Tampico, 12 cks.
Valparaiso, 8
Vera Cruz,

Pain er's Colours—
Bahia, 47 pks.
Beyrout, 53 kgs.
B. Ayres, { 100 26 cks. / 13 brls 87 cs.
Caldera, 75 100 cks.
C. C. Castle, 10
Chimbote, 50
Coquimbo, 20 cs.
Ciuaba, 11 10 dms.
Larnaca, 5 cks.
Marseilles, 10 pks.
Mollendo, 30
M. Video, 36 10
Montreal, 20 cs.
Montserrat, 2 cks.
New York, 2
Pacasmayo, 10
Para, 3 brls. 1 cs.
Parnahyba, 2
Pririsi, 2 9 1 bx.
Santos, 27 pks.
Talcahuano, 50 177 cs.
Toronto, 23 cks.
Vera Cruz, 200

Paraffin Wax—
Genoa, 16 bgs.
Palermo, 10
Rio de Janeiro, 6 cs.

Potash—
Alexandria, 12 c. 3 q. £12

Phosphorus—
Hiogo, 5 t. 10 c. £1,036
Shanghai, 3 8 550
Tampico, 5 46

Potassium Bichromate—
Lisbon, 3 cks. £22
Rio de Janeiro, 13 c. 2 q. 24
Smyrna, 40 148
Vera Cruz, 8 14

Potassium Chlorate—
Bari, 2 t. £60
Copenhagen, 1 10 c. 41
Gutujewsky, 46 5 1,387
Hamburg, 2 10 75
Hiogo, 30 851
Libau, 45 1,350
Montreal, 2 10 70
Naples, 1 30
Rio de Janeiro, 5 150
St. Petersburg, 33 10 945
Shanghai, 5 6
Sydney, 5 133
Tampico, 15 24
Vera Cruz, 3 11 108
Yokohama, 20 600

Potassium Cyanide—
Corunna, 10 c. £65

Potassium Prussiate—
Vera Cruz, 15 c. 2 q. £48

Potassium Silicate—
Sydney, 1 t. 2 c. £10

Salt—
Baltimore, 215 t.
Bata, 10 14 c.
Batanga, 19 14
Bermuda, 15
B. Ayres, 59
Cabenda, 8 11
Cameroons, 33 9
Chittagong, 2,210
Christiania, 355
Delhi, 150 cs.
E. London, 27
Jersey, 652
Lagos, 263 10 c.
Landana, 44
Malta, 36 cs.
Manaos, 18
Mayumba, 14 10 c.
New York, 2,600 bgs. 210 sks.
Para, 1,500 1,499
Philadelphia, 200 t.
Picton, 3,000 bgs.
Pt. Natal, 160
Rosario, { 300 brls. / 200 cs.
Salt Pond, 500
Santos, 50
Shanghai, 75
Stockholm, 2,436
Sydney, 1,200
Ukaka, 500
Vardo, 500

Salt Cake—
Antwerp, 60 t. £63
Terneuzen, 192 247

Saltpetre—
Para, 1 t. £17

Sheep Dip—
B. Ayres, { 31 t. 10 c. / 200 dms. £425
M. Video, 3 t. 7 38
Pt. Natal, 6 12 2 cs 59
Sydney, 7 18 216

Soap—
Alexandria, 25 cs.
Algoa Bay, 25 25 bdls.
Accra, 50 bxs.
Arica, 15
Barbadoes, 2,005
Belize, 250
Bleiron, 20
Bombay, 1,160
Calcutta, 18
Callao, 15
Cape Town, 2,625 80
Chama, 12
Christiania, 250
Cartagena, 20
Colombo, 40
Conakry, 100
Constantinople, 7
Durban, 575
E. London, 1,762 55
Galata, 40
Gibraltar, 200
Grenada, 75
Guayaquil, 50
Honfleur, 36
Johannesburg, 60 90 dms.
Lagos, 180
Landquart, 130
Lima, 20
Lucerne, 130
Macassar, 600
Malta, 90
Manaos, 320
Mauritius, 763
Menado, 100
Montreal, 570
New York, 42
Old Calabar, 846
Opobo, 1,320
Para, 100
Penang, 407
Pt. Natal, 1,650 50 10 skl.-cs.
Pt. Elizabeth, 3,476 70
Punta Arenas, 2
Rangoon, 600 32
Rotterdam, 100 363
St. John's, N'd., 200
Salt Pond, 27
San Sebastian, 500
Sierra Leone, 105
Singapore, 501
Smyrna, 21
Talcahuano, 10
Toronto, 800
Trinidad, 500 1
Valparaiso, 32
Wellington, 4 crts.
Winnebah, 100

Soap Leye—
New York, 12 dms.

Soda—
Marseilles, 175 kgs.
Montreal, 100 pks.

Soda Ash—
Aalborg, 100 bgs.
Boston, 1,740 122 cks.
Brisbane, 245
B. Ayres, { 200 brls. / 260
Calcutta, 225
Callao, 30
Cape Town, 680 kgs.
Christiania, 512 pks.
Copenhagen, 3 cks.
Drammen, 10
Genoa, 126 bgs.
Gothenburg, 268 pks.
Helsingborg, 150
Johannesburg, 230 kgs.
Limon, 20 cks.
M. Video, 50 185
New York, 5,678 bgs. 75
Philadelphia, 200 33 tcs.
Puerto Cabello, 4
Rio de Janeiro, 72
Rio Grande, 190
Schiedam, 836
Singapore, 10
Smyrna, 50 50 brls.
Sydney, 131
Trebizonde, 36
Valparaiso, 10
Vera Cruz, 66

Soda Crystals—
Alexandria, 50 brls.
Boston, 280
B. Ayres, 100 cks.
Gibraltar, 20
Hamburg, 12 kgs.
New York, 280
Pernambuco, 100
Philadelphia, 143
Pt. Said, 6
St. John's, 34
Smyrna, 50
Volo, 20

Sodium Arseniate—
New York, 10 cks.

Sodium Bicarbonate—
Aalborg, 10 kgs. 3 cks.
Alexandria, 20
Barcelona, 70
Bari, 50
Batavia, 10
Bilbao, 30 brls.
Bordeaux, 75 313 pks.
Brisbane, 40
Calcutta, 100 5 cks.
Callao, 20
Cape Town, 20
Colombo, 6
Copenhagen, 37
Corunna, 5
E. London, { 103 bgs. / 25 kgs.
Galatz, 20 20 dms.
Halifax, 50
Hamburg, 50
Honolulu, 40 cks.
Jersey, 5 bgs.
Lisbon, 75 kgs.
Melbourne, 1,197
M. Video, 50
Montreal, 162 pks.
Nantes, 118
Newcastle, 100
N. Orleans, 26
New York, 4 bgs.
Palermo, 15 kgs. 9 cks.
Pt. Natal, 60
Rouen, 186
Salonica, 20 20
Singapore, 10
Sydney, 450
Trieste, 10 2
Valparaiso, 3
Vera Cruz, 70

Sodium Chlorate—
Montreal, 50 kgs.
Rio de Janeiro, 10
St. Petersburg, 540

Sodium Hyposulphite—
Antofagasta, 10 kgs.
Callao, 30
Piræus, 10

Sodium Oxide—
Calcutta, 6 cs.

Sodium Silicate—
Corunna, 17 brls.

Sodium Sulphate—
Malta, 24 bgs.

Sulphur—
Boston, 75 t. £319
Drammen, 50 214
Ghent, 6 10 c. 28
Gothenburg, 50 214
Montreal, 350 8 1,533
Philadelphia, 100 4 426

Sulphuric Acid—
Pernambuco, 19 c. £13
Rio de Janeiro, 2 t. 4 16

Superphosphates—
Gd. Canary, 5 t. £16
Honfleur, 354 9 c. 3 q. 584
Las Palmas, 60 72
Libau, 1,050 1,992
Teneriffe, 20 70

Tannic Acid—
Lisbon, 12 c. 3 q. £72

Tartaric Acid—
Callao, 5 t. 3 c. 3 q. £26
Tampico, 6 3 35

Tin Salts—
Vera Cruz, 6 c. 1 q. £15

Varnish—
Antwerp, 14 cks.
Auckland, 3 cs.
Cape Town, 8
Constantinople, 2
Genoa, 2
Gd. Canary, 2
Leghorn, 12 pks.
Melbourne, 23
Pernambuco, 2
Piræus, 2
Rosario, 9
Smyrna, 1 18 dms.
Wellington, 15

White Lead—
Bahia, 40 kgs.
Odessa, 1 t. 2 c.
St. John's, N'fd., 20 kgs.

Zinc Chloride—
Karachi, 8 c. £7

MANCHESTER.

Week ending July 6th.

Alum—
Bagdad, 30 brls.

Aniline Colours—
Germany, 1 ck.
Holland, 5 kgs.

Aniline Oil—
Germany, 10 dms.

Carbolic Acid—
Paris, 80 cks.

Caustic Soda—
Campeche, 30 dms.
Rio Grande do Sul, 100

Chemicals (*otherwise undescribed*)
Rotterdam, 1 cs.

Copperas—
Bagdad, 90 brls.
Mohammerah, 20

Copper Sulphate—
Helsingfors, 12 cks.

Extracts—
Germany, 8 kgs
Gamma Acid—
Germany, 10 cks.
Glue—
Germany, 10 cks.
Holland, 13
Magnesium Sulphate—
Gothenburg, 40 bgs.
Naphthylamine—
Germany, 28 cks. 6 bls.
Naphtha—
Teignmouth, 24 cks.
Oxalic Acid—
Bushire, 4 cs.
Potassium Bicarbonate—
Bushire, 8 cs.
Soap—
Mohammerah, 50 bxs.
Soda Ash—
Helsingfors, 18 cks.
Sodium Bicarbonate—
St. Denis, 34 kgs.
Sodium Naphthionate—
Germany, 35 cks.
Tar—
Mondicoust, 30 brls.
Helsingfors, 200

GLASGOW.

Week ending July 7th.

Alkali—
Quebec, 2 t. 9 c.
Alum—
Turkey, £33
Ammonium Nitrate—
Italy, £42
Ammonium Sulphate—
Barbadoes, 153 t. 3¾ c.
Demerara, 264 13¾
Trinidad, 40 14
Boracic Acid—
Antwerp, £60
Borax—
Rotterdam, £22
Carbolic Acid—
Rotterdam, £300
Caustic Soda—
B. Ayres, 29 t. 18 c.
Chemicals (*otherwise undescribed*)
Rotterdam, £554
Coal Products
Benzine
France, £255
Benzol
Hamburg, 14 t. 6 c.
Creosote Oil
Christiania, 5 t. 6 c.
France, £6,436
Hamburg, 4 4
Pitch
Canada, £21
Hamburg, 13 t. 7 c.
Italy, 55
Portugal, £35 15s.
Tar
Christiania, 1 t. 4 c.
Hamburg, 23 10
Extracts—
Montreal, £34
Gutta-percha—
Hamburg, 41 lbs.
Iodine—
Rotterdam, £1,390
Lead Nitrate—
Italy, £185
Montreal, 5 t. 8 c.
Linseed Oil—
Callao, 2 t. 10½ c.
Litharge—
Stockholm, £223
Manganese (Recovered)—
Rotterdam, £120
Manure—
Barbadoes, 11 t. 16 c.
Paint—
Galata, £42 10s.
Painters' Colours—
Barbadoes, £39
B. Ayres, 93
Calcutta, 76
Cape Colony, 81
Cape Town, 358
Demerara, 20
E. London, 42
Fremantle, 42
M. Video, 69
Montreal, 12
Rotterdam, £6 10s
U.S.A., £167
Paraffin Wax—
Bordeaux, £24
Italy, 681
Turkey, 57
Potassium Bichromate—
Christiania, 3 t. 7 c.
Montreal, £73
Stockholm, 172
Turkey, 86
Soap—
E. London, 7 t.
Trinidad, 1 7 c.
Sodium Bichromate—
Montreal, 1 t. ¼ c.
Sodium Chlorate—
Montreal, 2 t. 9¾ c.
Starch—
Antwerp, £45

HULL.

Week ending July 2nd.

Alkali—
Bergen, 4 dms.
Danzig, 30 cks. 40
Reval, 30 75
Ruamo, 10
Ammonium Sulphate—
Bremen, 1,832 bgs.
Chemicals (*otherwise undescribed*)
Alexandria, 20 cs.
Amsterdam, 204 cks.
Antwerp, 1
Christiania, 25 5
Copenhagen, 6
Constantinople, 50 brls.
Drontheim, 400 pks.
Gothenburg, 10 47 cs.
Hamburg, 20
Helsingfors, 6 4
Odessa, 313 brls.
Reval, 7 cs.
Rouen, 10
Rotterdam, 116
St. Petersburg, 30
Stettin, 5 76 pks.
Uleaborg, 21
Wyburg, 14 10
Cottonseed Oil—
Amsterdam, 361 c.
Antwerp, 100
Drontheim, 7
Ghent, 101
Gothenburg, 17
Hamburg, 864
Norrkoping, 34
Rouen, 44
Rotterdam, 394
Stavanger, 21
Stettin, 203
Creosote—
Gothenburg, 250 cks.
Hamburg, 10 brls.
Dyestuffs (*otherwise unaescribed*)
Riga, 4 br's.
Rotterdam, 7 cks.
St. Petersburg, 33 cs.
Glue—
Gothenburg, 2 bgs.
Linseed Oil—
Amsterdam, 1,5 c.
Antwerp, 51
Christiania, 174
Copenhagen, 91
Constantinople, 69
Drontheim, 136
Hamburg, 21
Magnesia—
Constantinople, 12 cks.
Manure—
Dunkirk, 151 t.
Jersey, 6
Ochre—
Rotterdam, 4 cks.
Paint—
Constantinople, 100 cks.
Painters' Colours—
Antwerp, 121 cks. 27 cs.
Christiania, 11 3 200 dms.
Copenhagen, 3 1 1 3 pks.
Drontheim, 39
Ghent, 30 2 32 dms.
Gothenburg, 2 175
Hamburg, 4 7
Helsingfors, 1
Odessa, 141
Rotterdam, 11 3 50 pks.
Rouen, 20
St. Petersburg, 5
Stavanger, 5
Stettin, 3
Stockholm, 1
Wasa, 75
Pitch—
Antwerp, 80 t.
Reval, 56 cks.
Salt—
Reval, 60 bgs.
Slag Meal—
Gothenburg, 1,016 bgs.
Riga, 300
Wasa, 3,060
Soap—
Antwerp, 26 cs.
Christiania, 5
Gothenburg, 1
Hamburg, 1
Stockholm, 1
Starch—
Copenhagen, 130 cs.
Tallow—
Stockholm, 5 cks.
Tar—
Amsterdam, 10 cks.
Antwerp, 4
Christiania, 5 brls.
Copenhagen, 5
Danzig, 9
Hamburg, 10
Helsingfors, 25
Reval, 15
Stettin, 10
Wyburg, 100
Turpentine—
Gothenburg, 10 brls.
Varnish—
Antwerp, 3 dms.
Copenhagen, 1 cs.
Danzig, 4
Hamburg, 2 cks.
Stettin, 10
Waste Salt—
Amsterdam, 20 brls.

TYNE.

Week ending July 2nd.

Alkali—
Hamburg, 5 t. 10 c.
Rotterdam, 8 1
St. Petersburg, 13 18
Alumina Sulphate—
Rouen, 5 t. 1 c.
Ammonium Carbonate—
Hamburg, 15 c.
Ammonium Sulphate—
Hamburg, 50 t. 13 c.
Lisbon, 6 19
Anthracene—
Rotterdam, 2 t.
Antimony—
Rotterdam, 2 t.
St. Petersburg, 15
Barium Binox de—
Rouen, 16 t. 1 c.
Barytes—
Antwerp, 1 t.
Bleaching Powder—
Antwerp, 50 t. 3 c.
Copenhagen, 17 13
Drontheim, 3 11
Finnish Ports, 6 19
Odense, 15 2
Pomaroon, 1 5
Rotterdam, 14 3
St. Petersburg, 133 13
Bones—
Rouen, 15 c.
Carbolic Acid—
Odense, 9 c.
Caustic Soda—
Copenhagen, 4 t. 14 c.
Finnish Ports, 15 1
Hamburg, 36 6
Helsingfors, 9 2
Mira, 29
Montreal, 14 10
Odessa, 3
St. Petersburg, 116 cks. 15 t.
Venice, 2 18
Wiborg, 26
Chemicals (*otherwise undescribed*)
Sebastopol, 1 t. 3 c.
Ferric Oxide—
Sebastopol, 3 t. 6 c.
Ferrous Oxide—
Sebastopol, 10 c.
Litharge—
Copenhagen, 5 c.
Hamburg, 8 t. 3
Lisbon, 1 7
Magnesia—
Antwerp, 10 c.
Hamburg, 6
St. Petersburg. 11
Magnesium Carbonate—
St. Petersburg, 12 c.
Manure—
Valencia, 101 t. 2 c.
Paint—
Hamburg, 2 t. 7 c.
Paraffin Wax—
Helsingfors, 3 t. 2 c.
Phosphorus—
Valencia, 14 c.
Pitch—
Rouen, 20 t.
Soda—
Aarhuus, 7 t. 9 c.
Archangel, 30
Bodo, 1 1
Constantinople, 73 15
Finnish Ports, 23 9
Helsingfors, 23 5
Pomaron, 1 19
Rotterdam, 37 11
Venice, 9 18
Soda Ash—
Helsingfors, 75 t. 14 c.
Rokkala, 321
Venice, 5 8
Sodium Sulphate—
Odense, 5 t.
Porsgrund, 249
Sando, 16 5 c.
Sornæ, 510
St. Petersburg, 20 1
Sulphur—
Helsingfors, 9 c.
Superphosphate—
Stettin, 1,100 t.
White Lead—
Copenhagen, 4 t. 8 c.
Pomaron, 12
Zinc Ashes—
Rotterdam, 1 t. 16 c.

GOOLE.

Week ending June 29th.

Chemicals (*otherwise undescribed*)
Amsterdam, 22 cks. 5 dms.
Hamburg, 20
Coal Products (*otherwise undes.*)—
Amsterdam, 25 cks.
Antwerp, 25
Boulogne, 30
Ghent, 10 tins 2 dms.
Rotterdam, 55 cks.
Dyestuffs (*otherwise undescribed*)
Ghent, 2 cks.
Hamburg, 1
Rotterdam, 21 37 cs.
Glue—
Boulogne, 100 bgs.
Manure—
Dunkirk, 296 bgs.
Ghent, 64
Painters' Colours—
Boulogne, 1 cs.
Pitch—
Antwerp, 1,072 t.

GRIMSBY.

Week ending July 2nd.

Caoutchouc—
Gothenburg, 3 bls.
Chemicals (*otherwise undescribed*)
Antwerp, 3 cks.
Dieppe, 1
Rotterdam, 40 dms.
Coal Products (*otherwise undes.*)—
Dieppe, 91 cks.
Hamburg, 2 cs. 5 pks.
Malmo, 2
Painters' Colours—
Antwerp, 6 cks. 2 cs.
Rotterdam, 4

PRICES CURRENT.

WEDNESDAY, JULY 13TH, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids :—			
Acetic, 25 %, and 40 % .. .. per cwt.	6/-	&	8/6
,, Glacial .. .. ,,		37	6
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1¼
Oxalic .. .. nett ,,	0	0	3¼
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	0	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B .. .. ,,	0	0	2¾
,, =24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	9	5	0
,, ,, (grey) Hull .. .. ,,	9	3	9
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	5
Antimony .. .. per ton	37	10	0
,, (tartar emetic) .. .. per lb.	0	0	6¼
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	5
Benzol, 90's .. .. per gallon	0	0	10
,, 50/90 ,, ... ,,	0	0	10
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. .. per lb.	0	0	7
,, (liquid 95/97% .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2½
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	0	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	3
Copper .. .. per ton	49	18	9
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	17	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, Nitrate	20	0	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	10	0	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	5	0
,, Borate .. .. per cwt.	2	5	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. ,,	0	4	0
Oils :—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	5	0
Stearine .. .. per ton	24	10	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. ..nett per lb.	0	0	3⅜
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	15	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Cyanide, 98% .. .. ,,	0	1	3
,, Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
,, ,, (Caustic Potash) 75/80 % .. ,,	19	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6⅜
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3¾
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,, (f.o.r. w'ks.)	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	7	6
,, Arseniate, 45 % .. .. ,,	12	10	0
,, Chlorate .. .. per lb.	0	0	3⅝
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	3
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton (10 ton lots)	8	5	0
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	10	0
,, Phosphate .. .. ,,	9	10	0
,, Prussiate .. .. per lb.	0	0	5¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone : Best Quality .. .. ,,	4	13	9
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	22	0	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	72	10	0
Zinc (Spelter) .. .. ,,	20	7	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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AND

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

RIVER POLLUTION AGAIN.

WHETHER protracted legal proceedings constitute the best method for purifying our industrial rivers, is a question which still remains unsolved. Looking at it from the manufacturer's point of view, we certainly have come to the conclusion, which we have before freely expressed, that to haul a manufacturer into the Courts is about the least likely way of securing that co-operation which is essential in dealing with intricate cases such as that just published, wherein the Joint Committee of the River Ribble sued Messrs. Almond and Co. for permitting polluting materials to flow into the River Darwen.

The real defendants in the case, Messrs. J. G. Potter and Co., carrying on their business at South Belgrave Mill, Darwen, proved to the satisfaction of the Court that they were using every practicable means to render harmless the liquid which was put into the river, and that the said liquid was neither poisonous nor polluting. The jury were afforded the opportunity of inspecting the defendants' works, and the provisions made for dealing with the effluent; and the prosecuting counsel, in opening his case, said the main question for the jury to decide was whether the defendants had adopted the best practicable and available means of rendering that effluent harmless, the Joint Committee contending they had failed in this respect. Judgment was given against the Joint Committee, from which we infer that the jury did not believe that they had made out their case, neither had they the sympathy of the judge, who, in summing up, said there was no doubt a polluted liquid did flow into the stream, but the Legislature, in passing this Act, had endeavoured to prevent the pollution of rivers as far as it could, without destroying the industries carried on on the banks of rivers; and therefore it was provided that a person should not be deemed to have committed an offence against the Act if he showed to the satisfaction of the Court that he had used the best practicable and available means for rendering harmless the polluting matter. This the judge amplified when, on the Monday, the prosecuting counsel asked for a stay of execution, as they wished for a decision as to the meaning of the words reasonable and available. The judge said he should decline to grant the stay, as that particular point was never argued during the hearing. Mr. Sutton said he specially mentioned it in his address, but the reply of the judge was "I cannot give you any assistance, Mr. Sutton."

We desire to point out in this connection how very different are the means which have been adopted by the Alkali, &c., Works Act for the prevention of the pollution of the atmosphere from those adopted for the prevention of river pollution. Under the Alkali Act a very great and serious pollution was taken in hand, and, in the course of a few years, with scarcely a single prosecution, as much as 97% of the polluting matter was prevented from contaminating the atmoshere,

If similar methods had been adopted in the administration of river pollution prevention, our manufacturing streams would have been running clear water many years ago.

We do not believe in the policy of prosecuting manufacturers, who in these days of keen competition have quite enough to do to hold their heads above water, neither do we believe in the appointment of officials for this class of work who are allowed to take private practice in this particular subject from among those who may come under their supervision. The Alkali Act was very specific; one clause specially dealt with Inspectors, who were disqualified to act as such if they were interested either directly or indirectly in any of the processes or works which came under inspection. It was a great pity that a clause similar to this was not inserted in the various River Pollution Bills when they were before Parliament, but we trust this will be remedied in any future legislation.

It is now time to seriously consider whether the money that has been spent in legal expenses by both sides upon this question could not have been better employed in some other way,—a way which would have given manufacturers a better opportunity of showing what they can do in this direction, and in which the Joint Committees could have displayed greater reasonableness.

We have never agreed with the methods at present adopted, and we feel sure the prevention of river pollution will not be accomplished if they are still continued. The Irwell is almost as filthy as it was eight years ago, and the same may be said of the Ribble.

We await more light on this subject, and a revolution in the methods employed by the authorities empowered to enforce the prevention of river pollution.

THE WENLOCK ELECTROLYTIC COMPANY, LTD.

The prospectus of the Wenlock Electrolytic Company, Ltd., which appears just as we go to press, affords yet another proof of the beneficence with which Providence enables those who feel the burden of wealth to escape from the thraldom of the encumbrance. The brilliancy of the idea of turning a coalfield into chlorate of soda *in situ* is altogether too dazzling, and if only people would eat, drink, and be clothed with chlorate of soda, a few more coalfields might be used up in this way.

At the same time, and with all due respect to the Vendor Syndicate which is "selling at a profit," we cannot help thinking that £120,000. is a large sum to sink in making chlorate of soda. If it were to be laid out in making sausages for instance, we could have seen something in it, but we scarcely think that many of those who have had practical experience of the article to be manufactured will be found amongst the applicants for shares in the new company. Of course, if the coalfield is as good as represented, the company will always have a most valuable asset, and in time of need can convert itself into an ordinary colliery concern. This evidence of foresight so early in the game will doubtless attract those who like to have the proverbial second string to their bow.

Fire at a Works.—At noon on Monday notice was received at Manchester Chief Fire Station that the Clayton Aniline Co.'s works, at Clayton, were on fire. The brigade turned out in charge of the chief officer, Mr. Savage, and on arrival found a drying stove, with a room over, and the roof of a shed on fire The workmen had got some jets to work in connection with the firm's private fire apparatus; one other jet was attached by the brigade, and in about half an hour the fire was extinguished. The fire had its origin in the drying stove. The damage is not very considerable.

DISPUTE IN THE NITRATE TRADE.

QUESTION OF SHORTAGE.

In the Liverpool County Court on Wednesday, before his Honour Judge Collier, Messrs. G. C. Dobell and Co., general merchants, Liverpool, were plaintiffs in an action against Messrs. Watson and Co., Carnforth, agricultural merchants, to recover £1. 13s. 6d. balance of the price of nitrate of soda and interest. Defendants had deducted £1. 4s. 6d. for short delivery, and also the 9s. charged for interest. Mr. Greer (instructed by North, Kirk, and Cornett) appeared for the plaintiffs, and Mr. Bertram Jones for the defendants.

Mr. Greer said the question was as to whether or not the plaintiffs were entitled to charge on the weight they had charged, and whether the defendants were right in saying plaintiffs delivered short on the contracts to the extent of goods amounting to £1. 4s. 6d. The interest was charged in the usual way on an overdue account. The contracts were dated 11th December for 30 tons of nitrate of soda, and the 20th of January for a further lot of 10 tons. The main point was whether plaintiffs were to weigh in Liverpool, delivery being in Liverpool, or to take the weights from the rail at Carnforth. The importance of the point to the plaintiffs was this: They are dealers in nitrate of soda, and they sell on a contract which says either free on rail at Liverpool, or to deliver in Liverpool; in this case, the nitrate had to go to Carnforth, and the stuff loses in transit by sweating, etc. The weights had been taken partly by the Dock Board Officials and partly by the London and North Western Railway Company's men, who are accustomed to taking weights as between seller and purchaser, and the defendants said they ought to pay on the weights at Carnforth.

His honour said the Liverpool weights must be taken.

Mr. Bertram Jones raised the point of arbitration provided for disputes by a clause in the contract. Mr. Greer said defendants had refused to go to arbitration, and his Honour held that he had jurisdiction.

Mr. Bowman, member of the plaintiff firm, said it was a common thing for nitrate of soda to lose weight in transit, and the amount short at Carnforth was usual. Two to four per cent. loss is experienced between Chilian weights and the Liverpool weights. To the defendants he had charged the weights given to him by the railway company, and as furnished on the weight tickets of the Mersey Dock Board. It was usual to take the weights of the Dock authority. This was the first time he ever had the weights disputed. The nitrate on arrival, ex steamship Firth of Clyde, was stored under cover at the Garston vaults of the railway company, specially set aside for nitrate. The lot ex steamship Ravenswood was sent from over the ship's side. Damp atmosphere and shunting on the railway accounted for the shortage.

Evidence was given as to the weights.

Mr. John F. Watson, sole partner in the defendant firm, said he had never paid interest before. He had a siding of his own at Carnforth, and his warehouseman weighed some of the stuff and found a shortage. Subsequent lots were weighed by the railway company, and shortage found.

His Honour held that the weights at Carnforth were immaterial, and allowed 4 per cent. interest. That would be 7s. 1d. off the claim, and he gave judgment for the plaintiffs for £1. 6s. 5d. with costs.

Nitrate Litigation.—Notwithstanding the fact that the Lagunas Nitrate Co. has already spent about £50,000. in its recent case against the Syndicate, an appeal against Mr. Justice Romer's decision is decided upon.

Salt Shipments from the Mersey.—During June the shipments of salt have been heavier to all important markets, except Scotland, where the stocks left over from 1897 have still to be reckoned with. From the returns it appears that the week's shipments to the United States were 5,858 tons, against 4,776 tons in June of last year. The previous shipments this year to the United States, however, show a heavy reduction, the figures being 39,467 tons, compared with 52,807 tons last year. In the week's shipments the only decreases are to the West Indies, Central and South America, and to ports in the United Kingdom outside the Mersey. To British North America the shipments were 8,933 tons, compared with 6,124 tons; to Africa, 4,262 tons, compared with 2,685 tons; to Asia, 13,979 tons, against 10,605 tons; to Australasia, 2,424 tons against 1,316 tons; and to Continental ports, 10,680 tons, compared with 7,563 tons. The returns for the previous months of this year generally show increases over the corresponding period of last year, though there are large decreases to the United States and British North America. The total shipments for the week were 60 585 tons, against 52,112 tons in June, 1897. Of this 42,245 tons (against 33 689 tons) were shipped from Liverpool, and 18,340 tons (against 18,423 tons) from Runcorn and Weston. The total previous shipments this year were 260,821 tons, against 255,265 tons in the previous year. This included 221,566 tons (against 214,921 tons) from Liverpool, and 39,255 tons (against 40,344 tons from Runcorn and Weston.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Apparatus for the Manufacture of Ozone. D. Martim. 14,714. July 4.
Rapid Tanning Process. G. Feith. 14,724. July 4.
Manufacture of Sulphur Trioxide. O. Imray. 14,728. July 4.
Manufacture of Carbide of Magnesium. J. E. T. Woods and W. A. Byrom. 14,780. July 5.
Baryta and Pure Iron by Treating Barytes with Iron Oxide. O. Imray. 14,795. July 5.
Producing Carbonic Acid Gas. W. Saward. 14,804. July 5.
Obtaining Alumina. J. T. Hewitt and F. G. Pope. 14,911. July 7.
Treating Sewage. G. D. Wild. 14,997. July 8.
Electrodes. H. J. Haddan. 15,028. July 8.
Gold from Sea Water. H. C. Bull. 15,065. July 8.
Grease and Potash from Wool Washings. J. Smith & Sons, Ltd. 15,130. July 9.
Sterilizing with Ozone. M. Otto. 15,151. July 9.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

An Improved Apparatus for Distillation of Acids and other Corrosive Substances. P. A. Newton, 6, Bream's Buildings, London (communicated by The Baker and Adamson Chemical Co., Easton, Pa., U.S.A.) Eng. Pat. 10,132. May 3, 1898.

A number of glass or other vessels, like large test tubes, depend from a horizontal service pipe into a brickwork chamber, heated by a suitable furnace. The tubes are packed with asbestos so as to form a tight joint where they enter the service pipe. The acid is kept flowing through the latter pipe and the tubes, while the gaseous products escape by an exit in the upper side of the service pipe. There are two figures.

A New or Improved Manufacture of Hydraulic Cement. N. T. Ashton, Market Place, St. Ives, and J. Crompton, 5, Tregenna Terrace, St. Ives. Eng. Pat. 17,419. July 23, 1897.

A mixture of 20 parts granite, 1 part serpentine, 10 parts china clay, and 100 parts calciferous sand is powdered, made into slip, burnt to clinker, ground, and sieved, when it is ready for use. If the calciferous sand is deficient in lime, it is fortified by the addition of caustic lime. It has been found that the serpentine may be omitted, but it is preferable to include it.

An Improved Soap and Process of Manufacture therefor. W. S. Thomson, 112, Fore-street, London, E.C. Eng. Pat. 7,651. March 30, 1898.

In order to produce an ammonia soap, ordinary soap is milled once, the colouring and superfatting agents added and milled again, and then milled a third time, with the addition of 2 ozs. of liquid ammonia carefully mixed with 4 ozs. of rectified spirits of wine to every 84 lbs. of soap. Finally, the same amount of ammonia and alcohol, mixed with 26 ozs. of compounded essential oils, is milled in and the soap finished. The mixture of essential oil and ammonia must have been prepared 48 hours before using.

Process for the Manufacture of Solid but easily Soluble Alkaline Silicate. F. Henkel. 171, Gerresheimerstrasse, Dusseldorf. Eng. Pat. 9,730. April 27, 1898.

The crude silicate of soda or potash as obtained from the furnace may be treated in two ways. In either case, a crystalline hydrate is formed. By the first method the silicate from the furnace is pulverised and well mixed with one part of water to six of silicate, the mixture being strongly heated, until the water has disappeared. In the second method the silicate is dissolved by steam or hot water, and powdered silicate added to the hot solution. By either procedure a solid mass, easily powdered and easily dissolved, is obtained. Peat or sawdust may be added during manufacture if desired.

Improvements in the Manufacture of Carbide of Calcium. E. Tooth, 42, Wells-street, Redfern, Sydney, N.S.W. Eng. Pat. 8,554. April 12, 1898.

Thirty parts by weight of tar are mixed with 2% of molasses, 36 parts by weight of lime, and to the whole 10% of coal slack is added. This mixture is placed in refractory moulds, carbon electrodes being inserted through the ends so as to almost touch a carbon diaphragm, which is placed in the middle. When the current passes the diaphragm and electrodes are consumed, and the contents of the mould converted into carbide.

PETROLEUM NOTES.

ROUMANIAN AND MEXICAN DEVELOPMENTS.

YET another oil company—the Roumanian Oil Trust, Ltd.—has been brought out during the present week with a share capital of £710,000. and an issue of £200,000. debentures. The titles are beyond question, having been carefully examined into by the first legal authorities in Roumania when different lands were acquired by the Roumanian company. The English company will not attempt to hold the lands directly, but will hold the whole of the debenture and share capital of the Sleaus Romana. Messrs. Price, Waterhouse, and Co. report that upwards of half a million sterling has been spent on the lands, machinery, plant, well-boring, &c. The area of oil lands to be taken over amounts to about 23,000 acres, and it is found in practice that about four wells can be bored on each acre of land, and the average life of a well should be about five years. For the six months ending October, 1897, the output was at the rate of 43,728 tons per annum; for February, 1898, at the rate of 80,000 per annum, while for the month of June the returns show an output at the rate of 114,540 tons per annum. The vendors have arranged with the Deutsche Bank to guarantee for three years interest on the debentures at the rate of 5 per cent., on the preference at the rate of 6 per cent., and on the ordinary shares at the rate of 7 per cent.; but there would appear to be very little prospect of their being called upon to pay anything in respect of this guarantee, as the present output appears to ensure a larger return than 7 per cent. on the ordinary shares. Mr. Boverton Redwood, in his report, bases an estimate on Messrs. Price, Waterhouse, and Co.'s figures as to cost, selling prices, &c., and shows that with an output of 150,000 tons a year the company should make a net profit of about £186,000., which would mean the payment of at least 20 per cent. on the ordinary shares. Not only are the vendors contented with a moderate profit on their outlay, but they are willing to take the whole purchase price in scrip of the new company, with the exception of £150,000., while out of their profit they pay the cost of the flotation. The board of directors is a strong one, and the company will have the benefit of the experience of Dr. Ivar Lagerwall, who was director of Nobel Bros. Petroleum, and who has agreed to act as managing director.

The Mexican Government has granted a concession for the development of the oil industry in that country to Mr. L. de la Barra, of the firm of Cheesewright, De la Barra, and Furber, London. The promoter of the company represented by him undertakes to establish the coal extracting industry in the Republic, erect plant, build stores, &c., and invest not less than 250,000 dollars within the period of five years. The contract entered into is for a term of ten years.

The official returns of the production of crude oil in the Baku district for the first four months of this year, *i.e.*, January to May, show an increase of 25 per cent. over the production for the same period last year. During this period prices of crude oil have risen from 7¼ cops. per pood to 8¾ cops. per pood, or over 12 per cent. This goes to prove that some of the writers who take the opposite view are scarcely *au courant* with the business. This rise in prices has taken place during a period when many of our refineries have been idle, and few, if any, working to their full capacity. The great and increasing demand is for crude oil and residues as liquid fuel.

ONTARIO CORUNDUM LANDS.—A memorandum has been issued by Mr. J. M. Gibson, the Ontario Commissioner of Crown Lands stating that the first discovery of corundum in Ontario was made late in the year 1896, and exploration work carried on under direction of the Government in 1897 shows that the corundum-bearing lands have an aggregate area of about 50,000 acres, lying in the townships of Carlow, Bangor, Raglan, Radcliffe, Brudenel, Lyndoch, and Sebastopol, in the counties of Hastings and Renfrew. The mineral rights over nearly the whole of this tract are held by the Crown, and they have been withdrawn from sale and lease pending a report on the occurrence of the mineral and the methods of treating it, undertaken by the professors of the Kingston School of Mining. This report and a map of the corundum region will be published shortly, and copies of it may be had on application to the Bureau of Mines, Toronto. Meantime the attention of prospectors, miners, and capitalists is invited to the district, and, with a view to its development and the establishment of industries in the Province for treating and utilising the corundum ore, proposals will be received by Mr. Gibson until September 1 next.

WASHERS AND SCRUBBERS IN GAS WORKS.

(*Concluded from p. 23*).

"*Livesey*" *Washer.*—This washer consists of a rectangular cast-iron box, the upper part being formed into a inlet chamber, together with one or two outlets. To the lower flanges of these inlet chambers are fastened a series of wrought-iron tubes—a piece of which is on the table—having holes one-sixteenth of an inch in diameter. The interior of these tubes is in communication at the ends with the outlet chambers, while the spaces between them at the ends are securely closed up. The gas has free access from the inlet chamber direct to these intermediate spaces, passing down them in the direction indicated by the arrows in the diagram, and depressing the liquor until the gas escapes through the inclined portion of the perforated plate to the first space, which is filled with liquor, through which it bubbles until it comes in contact with the horizontal part of the perforated plate, carrying some of the liquor with it to the upper surface of the plate. The bubbles of gas pass through this liquor into the tube space and convert the surface into light foam, which flows along with the gas into the outer chambers. The liquor drains from the washer by means of overflow pipes, by which the level can be adjusted as required. The inlet for the liquor supply is placed at the lower part of the washer. Glass windows are fixed in the sides at opposite ends of the tubes, so that the bubbling and washing of the gas in the tubes may be clearly observed. Special provision is made in the lowest part of the chamber for the collection of the tar, which is separated, and falls to the bottom, being drawn off from that level independently of the liquor at regular periods. The apparatus possesses the great advantage of being absolutely automatic, and requiring only a trifling amount of attention; while, for its compactness and the small space occupied, it is probably the most economical and efficient type in existence. By the minute subdivision of the gas, which is brought twice into contact with the liquor, the entire removal of all the tar, and the greater part of the ammonia, is ensured. In some works the ammoniacal liquor from the tower scrubbers flows by gravitation *viâ* a tar and liquor separator direct into the washer, which is fixed at a desirable level for the purpose. The number of perforations through which the gas has to pass per foot of trough is 3,264, thus dividing the gas into many thousands of streams. Where more than one of these washers is used they are placed at different levels, to admit of the liquor gravitating from the last one to the first. The extensive adoption of this washer is sufficient guarantee of its efficiency.

"*Charles Hunt*" *Washer.*—The "Charles Hunt" patent washer is in reality a combined washer and scrubber. It is perfectly automatic. It consists of a series of chambers placed one over the other. The gas enters at the base and issues through vertical tubes, over which are placed inverted troughs sealing each compartment in liquor. Water is admitted at the top, and descends from tier to tier to the bottom; so that the gas on entering meets with warm liquor, and in its ascent is subjected to cooler liquid, until at the outlet in the last chamber it meets clean water. This gradual cooling of the gas is in accordance with the concensus of opinion as being the best preventive for naphthaline stoppages.

This washer possesses the advantage of being readily adjusted for variable makes of gas. A series of test cocks are provided for ascertaining the actual duty performed in each chamber. In the lower tiers, when desired, weak ammoniacal liquor from the hydraulic main and condensers can be admitted. One of the chief features is the enormous area of washing surface presented to the gas. The small ground area required by the apparatus is a great advantage, especially where the site is limited. The adjustment of the depth of seal in each chamber can be made while working in a few moments. It is a most efficient apparatus.

Marshall's Scrubber and Condenser.—Mr. Marshall, of the Copenhagen Works of the Danish Gas Company, has designed an effective combined condenser and scrubber. The gas passes in a downward direction between tubes, through which water is pumped in an upward one, the warm gas thus meeting at the inlet with a moderately warm condensing surface, and is gradually cooled in its passage through the apparatus. Water is dripped over the exterior of the water tubes, and the condenser becomes an effective scrubber, as the tubes present a considerable area of wetted surface; while a secondary effect of the trickling water is to clean the tubes from any deposit of tar, &c. The water is prevented from running down the sides of the condenser by a series of drain plates. One battery of seven sections is capable of condensing 350,000 cubic feet of gas per twenty-four hours; from 142° to 63° F., the temperature of the inlet water being 60° F. The consumption of water to effect this result averages 5,000 gallons. The battery contains 1,054 square feet of water surface, and 204 square feet of air surface. The apparatus is automatic, and does not require machinery other than for water purposes.

Anderson's Washer.—Mr. Anderson has always strongly advocated the use of washers. His design is composed of a chamber, containing a number of trays, underneath which a series of serrated bars extend from side to side. Weak liquor is admitted at the top. The trays seal in liquor, and the gas issues through them minutely divided.

Young's Washer.—The washer designed by the late Mr. Hugh Young, the engineer of the extinct Birmingham and Staffordshire Gas Company, consisted simply of high cast-iron rectangular vessels filled with wooden boards, through which the gas traverses up and down in two or more sections, being thoroughly drenched with liquor, a continuous supply of which descends from the top.

Reid's Washer.—Mr. John Reid's rotary washer for the Edinburgh and Leith Gas Commissioners, consisted of two hollow cylinders, all round which were fixed buckets, giving the appearance of a large water wheel. The wheels, revolving in a tank of liquor, discharge their contents inside the cylinders, which are revolved by a rack fixed on their circumference actuated by a pinion.

"*Holme's*" *Washer.*—Messrs. W. C. Holmes & Co.'s patent scrubber-washer is in successful use in many gas-works. It is of the horizontal rotary form and vertical types. The washing substance therein consists of a series of brushes made from a weed which has grown in water, thus ensuring a minimum amount of decomposition from the liquid contact. Such brushes contain an enormous quantity of wetted impinging surface for the small space occupied. This scrubber-washer, in addition to being one of the most efficient for removing ammonia, is also being used with considerable success in connection with cyanogen plants.

Kirkham's Washer-scrubber.—This "Standard" washer-scrubber is of the horizontal rotary type. The purifying action consists in the gas passing at all points over a wetted surface composed of constantly revolving wood grids. These grids are arranged in a series of horizontal compartments, the division plates forming them permitting the water to overflow from one compartment to another. The gas in passing through in this manner comes in contact last of all at the outlet with clean water. The "internal bundles" were formerly made of perforated plates, but in order to reduce the weight for the driving, etc., wood has been substituted. It is one of the most popular forms of washer-scrubber in existence.

Whimster's Washer and Exhauster.—Mr. Thomas Whimster's combined exhauster and washer, made by Messrs. Hanna, Donald and Wilson, possesses several features of interest. A horizontal cylinder is divided into three compartments. Between these partitions there are a pair of revolving discs connected by a number of curved blades, thus constituting a series of bucket-like chambers. The gas entering the central division is carried down by the aforesaid curved blades below the liquor level, and escapes through openings at the centre of the revolving drum, and up through the liquor into two side divisions provided with outlets. The principle of thus exhausting the gas during the washing operation is worthy of further development and adaptation.

Laycock & Clapham's Washer.—This is of the rotary horizontal type, consisting of compartments in which cylinders fastened on the central shaft and filled with wood balls revolve in ammoniacal liquor, thus ensuring the complete passage of the gas through, and in contact with, a large area of fresh and continuously wetted material.

Cathel's Washer.—The washer by Mr. E. S. Cathel is composed of a series of small washers, each of which is complete. They are elevated one above the other successively, and have also been placed one over the other vertically.

Walker's Purifying Machine.—Messrs. C. & W. Walker's machine consists of a rectangular vessel containing in its lower part a washing chamber, having on each vertical side numerous horizontal troughs open at the bottom, which have fine perforated slits on each side. The washing chamber is filled with liquor to the level of these perforations. The gas entering the receiver fills the troughs, from which it displaces a quantity of ammoniacal liquor, and passes through the immersed perforations. It then passes through the stronger liquor outside, and is thus relieved of its tarry particles, which fall through the liquor into the bottom chamber, and are subsequently drawn off. The gas, after leaving the washing chamber, ascends through rectangular openings over which are fixed the boxes of devices cantaining wetted boards. These devices are fixed upon vertical shafts in connection with gearing for moving them up and down in the liquid. The gas passes from chamber to chamber between the wetted boards in each tier, until it arrives at the top free from ammonia and tar, together with a portion of the carbonic acid and sulphuretted hydrogen. The devices constantly dipping into the liquor, expose to the gas a large amount of wetted surface. The number of dips per minute adopted at Huddersfield is about six, and this in a three-million machine equals about ten millions of square feet per hour exposed to the gas; so that no portion of it can remain unwetted for more than one-sixth of a minute at a time. The action of this enormous wetted surface is to absorb the ammonia from the gas, thus forming strong ammonical liquor, which decends into the bottom washing chambers for the purpose of taking up the carbon dioxide. Clean water is admitted into the top at the rate of about ten gallons per ton of coal carbonised, and this water decends from chamber to chamber. Weak liquor is admitted

into the bottom tiers. The liquor overflowing into the next lower tier of the machine meets the ascending streams of the gas nearly wholly free from ammonia. Only about one inch back pressure is thrown by this machine, which is a most efficient one. The power required for driving it is so small that a man can work the whole of the machine by taking hold of the fly-wheel and pulling it round with one hand.

Many different forms of washers and scrubbers have ingenious and interesting points with which the members are familiar, such as—

The "Saville."

The "Coffey Still," which is sometimes used for a scrubber and washer.

Mr. Paddon's excellent washer-scrubber.

Mr. George Lowe's scrubber.

Mr. Warner's scrubber.

Mr. Cleland's steam scrubber.

Mr. Anderson's brush scrubber.

Messrs. Cockey and Sons; and many others.

The examples described will probably be sufficient illustrations, as representative of the various designs in use.

Ammonia.—Almost invariably upon gas-works, all the various ammoniacal liquors, whether from hydraulic mains, condensers, cooling mains, washers, scrubbers, &c., are drained into one common storage tank, although, having regard to the various compositions of these liquors, this is hardly a scientific way of dealing with them.

The question of the desirability of using purified liquor is too extensive for present consideration.

In Hill's process the ammoniacal liquor is passed through a kind of still, so regulated that about 50 per cent. of sulphuretted hydrogen and carbon dioxide present are liberated. The purified liquor, as it is termed, is then run back into washers, and is ready to take up another quantity of these impurities.

Ammoniacal liquor used in washers, unless purified by some such process, must not be allowed to be too heavily charged with carbon dioxide, or it will displace the sulphuretted hydrogen in a similar manner to that which obtains in the ordinary purifiers. The general principle is to heat ammoniacal liquor to a temperature of about 200° F., when the greater part of the carbon dioxide and sulphuretted hydrogen are driven off, the bulk of the ammonia being retained.

Comparatively little attention is paid to the properties of ammonia at various temperatures.

Coals contain 1 to 2 per cent. of nitrogen, and hold about 14 per per cent. of this amount as ammonia during distillation at ordinary temperatures. This represents 5·7 lbs. of ammonia per ton of coal.

Thus

$$2240 \times 1{\cdot}5 \text{ per cent.} = 33{\cdot}6 \text{ lbs.} \times 14 = 4{\cdot}7 \text{ lbs. nitrogen.}$$

$NH_3 = 17$, molecular weight. $N = 14$.

$$\frac{4{\cdot}7 \times 17}{14} = 5{\cdot}7 \text{ lbs. of ammonia per ton.}$$

The weight of a cubic foot of ammonia is 316·77 grains.

Cannel coals generally contain less nitrogen than common coals. It is generally considered that Continental coals produce much less fixed ammonia than those in the United Kingdom. The nitrogen in coal may be reckoned distributed as follows:—

As ammonia	14·50 per cent.
As cyanogen	1·56 ,,
Free in gas, and combined in tar ..	35·26 ,,
Coke	48·68 ,,
	100·00

Mr. Lewis Thompson recommended that a small percentage of ammonia should be left in the gas, to combine with the sulphur compounds and produce sulphate of ammonia, as being likely to have a sanitary influence. Owing to the reduction of sulphur compounds, and the increased purity of the gas now issued from gas-works, it is undesirable in every way.

Conclusion.—Failing a continuous process of purification in closed vessels, it is most desirable to get as large a percentage of purification done as possible in the existing closed vessels, such as have been enumerated. A good deal more could be done by liquid purification than is generally accomplished, and this principle was generally recognised in the early days of gas purification. It will be remembered that some forty or fifty years since a solution of sulphuric acid was used for purification, but the "acid boxes" have become extinct, on account of the affinity of sulphuric acid for the hydrocarbons. It is probable that a return in some improved form will be made sooner or later.

The paper was illustrated with numerous diagrams and models.

HOLIDAY MAKING EXTRAORDINARY.—A local association established at Pwllheli is offering to the public one of the cheapest holidays on record. For the remarkably small sum of £2. they provide a week's board and accommodation with 5 days' trips covering 100 miles of coaching. The association is under the auspices of the Town Council and the Town Clerk acts as Hon. Secretary.

Legal Intelligence.

HIGH COURT OF JUSTICE.—CHANCERY DIVISION.

Before Mr. Justice Bigham, sitting as an Additional Judge of the Chancery Division.

THE CASTNER-KELLNER ALKALI COMPANY (LIMITED) V. THE COMMERCIAL DEVELOPMENT CORPORATION (LIMITED).

This was an action brought by the plaintiffs, who are the registered owners of letters patent No. 20, 259 of the year 1894, granted to Mr. Carl Kellner for an invention of improvements in the electrolytic apparatus for decomposing alkaline salts, for an injunction restraining the defendants from manufacturing or selling caustic soda or other alkali in infringement of their letters patent.

Mr. Flecther Moulton, Q. C., Mr. Bousfield, Q.C., Mr. J. Graham, Mr. A. J. Walter, and Lord Robert Cecil, appeared for the plaintiffs; and Mr. T. Terrell, Q.C, Mr. Astbury, Q.C., Mr. MacConkey, and Mr. J. H. Gray for the defendants.

The hearing of the action was begun on Thursday, the 14th inst., and concluded on Tuesday this week.

Mr. Moulton, Q.C., said that before the development of electricity, caustic soda had been manufactured from chloride of sodium, or common salt, by a chemical process. But within recent years the process had been introduced of separating the sodium from the chlorine by the action of electricity. In this process, carbon was generally used as the anode and mercury as the cathode. A solution of salt was placed in a chamber containing mercury and an electric current was passed through it, the effect of which was to separate the sodium from the chlorine, the latter passing away in gas and the former, being absorbed by the mercury, forming an amalgam. When the mercury was fully charged the salt solution had to be removed, and the amalgam was treated with water. The sodium, having a strong affinity for oxygen, united with the oxygen of the water to form oxide of sodium, or caustic soda, the hydrogen passing away and the mercury being left pure again. The difficulty of this process was that, owing to the strong affinity of sodium for oxygen, before the amalgam could be removed from the salt solution and treated with pure water the sodium began to go back to combine with the oxygen of the water of the salt solution. The plaintiffs were the owners of two patents—one taken out by Mr. Castner and the other by Mr. Carl Kellner, both of which sought to overcome the difficulty by the adoption of a continuous process. In the Castner patent a circular chamber was used, divided into two halves by a diaphragm or partition which did not quite touch the bottom of the chamber. Enough mercury was placed in the chamber to seal the two halves, one from the other. In the one half salt solution was placed and in the other water. The mercury when charged with sodium in the first half was removed to the other half by means of a paddle. Kellner professed to improve on this process by allowing the mercury to remain stationary relative to its containing vessel, and his claim was for "an apparatus for the electrolysis of alkaline salts with the aid of a stationary mercury cathode." Instead of a chamber divided into two halves he used a large chamber, called the combining chamber, which contained water and mercury, and a smaller chamber or series of chambers, called the decomposing chamber, containing the salt solution. These chambers were in the form of bells, and were so placed as to dip into the mercury, which thus sealed them, separating the water from the salt solution. The bells were moved to and fro slowly, so that the mercury should be exposed alternately to the action of the salt solution and the water. Notches were cut in the edges of the bells to let the mercury pass, or, alternatively, grooves were cut in the bottom of the outer vessel. This was the apparatus described in Figs. 1, 2, 3, 4 and 5 of the complete specification. In another form, described in Figs. 7 and 8, the bells were arranged radially, and either the bells or the outer or combining chamber rotated. The defendants proposed to use an apparatus patented by Mr. Rhodin in 1896. They had erected experimental plant and had formed a company to manufacture caustic soda by means of this apparatus. It consisted of two circular chambers, one inside the other. The outer chamber was the combining chamber, and contained water and mercury. It was fitted with radial ribs at the bottom, and rotated. The inner or decomposing chamber, which contained the salt solution, had at the bottom projecting mouths which dipped into the mercury, and by means of the rotary motion of the outer chamber the same result was obtained as in the Castner and Kellner patents. The defendants' apparatus was in fact identical with the rotating form of the Kellner patent. The plaintiffs claimed that the Kellner patent, which was the one now sued on, differed from the Castner patent in the fact that under it the mercury was kept stationary. All other processes assumed that it was necessary to agitate the mercury. The defendants had added nothing to the Kellner patent. The Kellner patent was attached for disconformity on the ground that the apparatus described in Figs. 7 and 8 of the complete specification was not a natural development of the provisional specification, which

was limited to the apparatus described in Figs. 1, 2, 3, 4, and 5 of the complete specification, and on the further ground that in the complete specification, Fig. 9, there had been introduced a device whereby, by means of a separate electric current introduced into the water, the combination of the oxygen and the sodium was accelerated. These, the learned counsel contended, were only natural developments of the invention.

Mr. Swinburne gave evidence in support of the plaintiffs' case.

Cross-examined by Mr. Terrell, Q.C., he said that the method of manufacturing caustic soda from salt by means of electricity was 60 years old. The Atkins and Applegarth patent of 1890 introduced the use of mercury for the purpose of being first charged with sodium and then discharged. In the Hermite and Dubosc patent mercury was poured over a sloping metal plate, where the electrolysis took place, and then flowed down a trough to a chamber, where the soda was decomposed out of it. In the Castner patent an arm or paddle was used to shift the mercury. The same result would be effected by moving the bottom of the chamber. That was done in the rotary form of Kellner's patent. In the Kellner patent the mercury would be agitated just as much as in Castner's patent, but that in Kellner's patent there were grooves in the lower or outer chamber which to a certain extent prevented the motion of the mercury. The plaintiffs did not use the apparatus upon which they were suing, but an apparatus which they considered was better. It was similar to Castner's with the exception that the mercury was moved from one chamber to the other by means of rocking, and not by means of a paddle. In Kellner's patent the grooves necessitated the use of an increased quantity of mercury. The witness did not think that Kellner's patent had an advantage over Castner's. In Castner's patent a thinner layer of mercury could be used, and a saving thus effected.

Lord Kelvin also gave evidence on behalf of the plaintiffs.

Mr. Terrell, Q.C., in the course of the case, said that there were three methods of accomplishing the particular purpose of exposing the mercury alternately to electrified salt solution and to water. The first was Castner's apparatus. The second was the apparatus described in Kellner's specification in Figs. 1, 2, 3, 4, and 5, having a to and fro movement. The third was the apparatus described in Figs. 7 and 8, having a rotary movement. The plaintiffs contended that apparatus described in Figs. 1, 2, 3, 4, and 5 differed from Castner's patent in not agitating the mercury. The defendants' case was that the advantage of not agitating the mercury could not be shown, and, even if it could, it could not be shown that the invention was a substantial one. The defendants' apparatus, which was rotary like that described in Figs. 7 and 8 of Kellner's specification, was provided with radial ribs introduced for the express purpose of promoting agitation and circulation of the mercury. As the combining chamber rotated the mercury was forced outwards by centrifugal force to the sides of the combining chamber, which extended some way beyond the circumference of the decomposing chamber. It was found that better results were thus obtained and that 90 per cent. of the sodium absorbed by the mercury in the decomposing chamber could be collected from it in the combining chamber, whereas by Kellner's apparatus only about 50 per cent. could be collected. If, therefore, the defendants' apparatus was an infringement of any patent it was an infringement of Castner's and not of Kellner's. The difference between the Castner and the Kellner patent, which Mr. Moulton laid stress on, was the use in the latter patent of stationary mercury, the object of which was economy in the amount of mercury used. He (the learned counsel) would show that the cost of the mercury used in Castner's apparatus was £3., the cost of the mercury used in Kellner's being £5 There was a saving, therefore, of £2. The mercury lasted practically for ever. The annual saving of the mercury was, therefore, the interest on £2. The value of the products made in one apparatus during the year was £255. The economy, therefore, effected by Kellner's patent was insignificant. The learned counsel contended that Kellner's patent was void, because, though it differed from Castner's patent, it involved no substantial invention within the Statute of Monopolies, nor was any substantial increase of utility shown over Castner's patent. He cited "Hicks v. Safety Light Corporation" (4 Ch. D., 615); "Williams v. Nye" (7 Patent Office Reports, 93); "Morgan v. Windover" (*i.b.*, 134); "Gadd v. the Mayor of Manchester" (9 Patent Office Reports, 524); and "Rickman v. Thierry" (14 Patent Office Reports, 114). The plaintiffs were in a dilemma because, in order to show a difference between the Kellner and Castner patents, they had to rely on the mercury being stationary. As a matter of fact, it was not stationary; but, assuming it to be so, the defendants had not infringed because in their apparatus the mercury was agitated as in Castner's. If the defendants' apparatus was an infringement of the rotating apparatus described in Figs. 7 and 8, then that apparatus rendered the patent void for disconformity.

Mr. Dugald Clerk, Mr. G. A. Grindle, Professor B. V. Boyd, and Mr. J. G. A. Rhodin gave evidence in support of the defendants' case.

Mr. Bousfield, Q.C., in his reply, said that in Castner's patent the object was to mix up the mercury so as to keep the whole of it saturated with sodium in the constant ratio of ·2 per cent. The object of Kellner's patent was to keep the mercury stationary and to charge a patch of it with sodium, and then by shifting the bell to charge a new patch and uncharge the first patch. The movement of the rotary form of Kellner's patent, in which the bells were arranged in a circle and rotated, was equivalent to the movement of the original form, in which the bells were arranged in a line and moved to-and-fro. The two movements had the same effect of alternately covering and uncovering patches of the mercury.

Mr. Terrell, Q.C., contended that the two movements were not equivalent, because for the rotating movement to be equivalent to the to-and-fro movement it ought to be, not a continuous rotation, but a rotation through a given number of degrees and then a corresponding rotation back again.

At the conclusion of the case his Lordship reserved his judgment, stating that he would try to deliver it in the course of two or three days.

DR. PERKIN ON RESEARCH.

In thanking the Society of Chemical Industry for the silver medal which was presented to him at the annual meeting last week, Dr. Perkin said:—From my earliest acquaintance with chemistry, and whilst a schoolboy, the idea of working at experimental research and the possibility of making scientific discovery, became a leading thought in my mind, and since then I have found practically how important is research, not only from a scientific point of view, but also from a technical, so that I have, as far as in me lay, sought to impress others with its value and the great importance of cultivating it. As I have mentioned on previous occasions, one of the greatest fears I had when I was led into technical work was that it might make it impossible for me to continue to follow scientific investigation, though I determined to do so if possible, because in those days very little research, properly so-called, was carried out in chemical works, very few even possessing laboratories. But now it is gratifying to find that its practical importance is by many manufacturers more fully realised, so that it is getting understood that it is absolutely necessary, if progress is to be made, that a chemical works should be a place of research, as well as a factory. This state of things has been brought about by the coal-tar industry, which is the most remarkable evidence of the value of scientific research to technical work that ever existed; in fact, had it not been for research, the very raw materials required in this industry would not have been known. Its birth also took place during the prosecution of research, and its wonderful development had also been due to research. It is very useful to remember that whilst this industry has been so greatly benefited by this means, it has, in return, most bountifully furthered science by handing back to it new materials for investigation which could not otherwise have been obtained, and also by bringing forward new problems to be solved; and by doing this has been again enriched with fresh fruit for science, so that technical and scientific work have gone together, hand in hand, to an extent never before experienced. This condition of things has now spread to other chemical industries. There is also another interesting matter connected with the influence of the coal-tar colour industry on technical chemistry, and that is in relation to chemical plant. At the time when this industry was commenced, the plant used in chemical works was mostly of a crude nature, and none of it was suitable for this new industry, where the products are costly, the operations delicate, and in many cases the chemicals used are of a very active and corrosive nature. This necessitated the invention of new plant of a much higher order than that in use at that date, requiring for its construction a good knowledge of chemistry and physics, as well as of engineering, etc., and the use of this higher class of plant in the colour industry has had a large influence in improving the character of that now used in chemical works generally. Much more might be said in relation to the subjects I have referred to, but this is not the occasion to do so. I allude to them, however, because it is a great satisfaction to me to see the wonderful spread of scientific work, and the great advancement of technical work which has taken place, directly and indirectly, by the development of the coal-tar colour industry, the foundation of which fell to my lot.

American Chemical Trade.—The Navassa Guano Company of Wilmington, N.C., is making extensive additions to its manufacturing plant. Forty-four new ovens for burning pyrites are being put in, which, with the buildings to contain them, will cost £4,000.—The Roessler & Hasslacher Chemical Company, main office 100, William-street, New York, has on exhibition in the Mines and Mining Building at the Omaha Exposition its make of 98-99% cyanide, besides lime dust, peroxide of sodium, permanganate of potash, chloride of lime, etc.—The Greenville (S.C.) Fertiliser Company is building a large addition to its acid chambers to make sulphuric acid direct from iron pyrites. The plant, when completed, will have cost about £5,000.

Reports of Companies.

NEW JULIA NITRATE, LTD.

AN extraordinary general meeting of the shareholders of the New Julia Nitrate Company, Limited, was held on Wednesday at Winchester House, E C., for the purpose of considering and, if thought fit, passing resolutions for the reconstruction of the company. Mr. J. T. C. Winkfield presided. The chairman stated that he was alone on this occasion, his colleagues, unfortunately, being unable to support him. ("Oh!") The meeting had been called at the request of the committee appointed by the shareholders at the last meeting, and that body had issued their scheme. Mr. Moutrie's scheme was originally approved by the board, but when the present scheme was put forward they considered it a better one. According to the number of proxies, the committee's scheme had a preponderating majority, but not sufficient to carry the scheme as against Mr. Moutrie's, it being necessary to have a three-fourths majority. If the scheme was not carried there was no alternative but liquidation. Mr. Parsons considered the committee's scheme the only one that held out any hope of success for the company. Concerning the water supply, Mr. Moutrie appeared to think that the Herman well was the only supply the company had, but there were others. The property had never been legally vested in the company by the old liquidator, and it would be the first duty of any board to have it properly transferred. They had not the requisite majority to carry their scheme, and, if it were not agreed to, the company must go into liquidation, because it did not possess a penny. He concluded by moving the scheme of reconstruction. Mr. O. H. Smith seconded the motion. After some discussion, the meeting was adjourned, for the purpose, if possible, of some compromise being arrived at between the parties.

PACIFIC BORAX AND REDWOOD'S CHEMICAL WORKS.

The directors of Pacific Borax and Redwood's Chemical Works, Limited, report for the year ended March 31st last states that the profits for the year amount to £88,371., being an increase of over 50 per cent. on those of the previous year. After taking into account the amount brought forward from last year, and deducting debenture interest up to March 31 and the interim dividend paid in October, there remains a balance of £68,406. After making the necessary provision for the redemption of twenty-six debentures, £2,860., and the payment, on May 1 last, of the final half-year's dividend on the preference shares, £6,750., it is proposed to deal with the balance of £58,796. as follows: To add to reserve depreciation account, £5,000; to place to general reserve account, £10,000; to pay a final dividend on the ordinary shares, making, with the interim dividend already paid, 10 per cent. for the year, and to carry forward the balance of £21,396. The total reserve accounts, including debenture redemption, will then amount to £33,100. The satisfactory results of the year's working are mainly due to a very large increase in the volume of the company's business; whilst, owing to economies which have been effected in working, the cost price of the company's products has been considerably reduced. A further saving in the cost of production may be looked for from the railway at the company's mines now on the point of completion, and from the new factory in course of erection at Bayonne, New Jersey. Since the close of the company's financial year an issue of £150,000. five per cent. second mortgage debentures has been authorised by the shareholders and issued. The proceeds have been devoted to the acquisition of additional works and other property, which materially strengthened the position of the company, and will, in the director's opinion, largely increase its earning capacity.

BRITISH ALUMINIUM CO., LTD.

In their report for the year ended December 31st last, the Directors announce that a profit of £10,811. has been made, which, together with the £1,243. carried forward from the previous year, amounts to £12,054. available for dividend. An interim dividend, amounting to £1,128., was paid on July 21 last year, leaving a balance of £10,925. The directors now recommend the payment of the cumulative seven per cent. dividend on the preference shares up to July 1, 1896, and that the balance be carried forward. The factories are now all in good working order. The large engineering works for the storage of the water at Foyers were completed at the end of last December, and the increase of plant at the different factories has so far progressed that it is hoped they will all be able to work to their full capacity before the end of the present year. In order to meet the cost of these works, and also to have a larger working capital in hand, which has been found necessary owing to the development of the business, the directors have made another issue of five per cent. debentures. The directors have entered into agreements with a new company called Scottish Aluminium, Limited, which has been successfully floated in Scotland for the purpose of starting works at Greenock, capable of manufacturing the metal produced at the factory at Foyers, into rods, sheets, castings, &c., and under these agreements the British Aluminium Company, Limited, will receive £10,000 in shares.

THE INDIA-RUBBER, GUTTA-PERCHA AND TELEGRAPH CONSTRUCTION CO.

The shareholders of this Company were summoned recently to a meeting in London to sanction an interim dividend of 2½ per cent. for the half year. The chairman, in moving the resolution, alluded to the increasing scarcity of the raw rubber, saying that they had been obliged to increase their price last year by 10 per cent., and at the end of this half year they had again increased it another 6 per cent. The scarcity rendered it exceedingly difficult to meet the demands for submarine work. In order to show the comparative facility with which the repairing ship could now carry on its work, he mentioned that the crew had just grappled and successfully raised a cable from a depth of 2,600 fathoms, and had laid another cable over 800 nautical miles and buoyed up the end while they returned for a fresh cargo. Deep sea cables, while far less liable to interruption than those in shallow water, were also easily repairable. The resolution was adopted.

Parliamentary Jottings.

LEAD POISONING.

In the House of Commons last week, Mr. Drage (Derby) asked the Secretary of State for the Home Department whether he could give any statistics showing the effect of employment in the dangerous processes in potteries on the health of women and their children as well as on the health of young persons.

Sir M. W. Ridley (Lancashire, Blackpool):—I am not sure that I understand what kind of statistics the hon. member has in his mind. There are many recorded instances which amply prove that in the pottery trade, as elsewhere, the occurrence of lead poisoning in the mother is capable of producing grave effects upon the child. The total number of reported cases of lead poisoning among women and girls engaged in the manufacture of earthenware and china during the two-and-a-half-years since the Act of 1895 came into force is, women, 528; girls, 63—a yearly average of about 230—the number of females employed in Staffordshire being 20,705.

Mr. Drage also asked whether the right hon. gentleman could give any statistics comparing the health of workpeople in potteries where mechanical ventilation had been introduced with the health of workpeople employed in potteries without mechanical ventilation.

Sir M. W. Ridley:—I am afraid I have no statistics of the kind, and it would be difficult to obtain them. The great improvement effected by the introduction of mechanical ventilation is sufficiently evident, and one of the points aimed at in the new rules I am taking steps to establish is the more general adoption of fans in all dusty processes in potteries.

Mr. Woodall (Hanley): May I ask the right hon. gentleman whether he will consider the practicability of informing the House as to the proportion of cases in which lead poisoning has been certified by a medical practitioner whose report has afterwards been found to be unfounded?

Sir M. W. Ridley: Every information of that kind I am now endeavouring to obtain. It is a very difficult question, but I will bear it in mind.

THE MATCH-MAKING TRADE.

Mr. Steadman (Tower Hamlets, Stepney) asked the Secretary of State for the Home Department if he would inform the House what steps he was taking to inquire into the deadly use of yellow phosphorus in the match-making trade; and, if so, would he report the result of such inquiries at the earliest opportunity?

Sir M. W. Ridley: The steps taken are, very briefly, these:—Every match factory in the country has been specially visited and reported on by the factory inspectors; many of them also, so far as the employment of women is concerned, by the lady inspectors. Inquiries are being made through the Foreign Office as to the measures adopted and the results obtained in foreign countries. Further, the question is being investigated, on the scientific side, by two distinguished experts—Dr. Oliver and Dr. Thorpe—the former of whom has already visited the chief match factories in France and made a special report; and from the dental point of view by Dr. George Cunningham, dental surgeon of the London Hospital, who has already made a preliminary report, and whom I propose to send to France to continue his inquiries in the French manufactories. I shall as soon as possible communicate to the House the result of these investigations.

THE NEW CONVEYOR CO., LTD.—This Company having had to run their workshops night and day, and being still unable to supply the demand for their specialities, have decided to duplicate their present workshops.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for May, 1898, as compared with May, 1897 :—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	41,970	33,106	11,998	8,796
Sweden and Norway	10,444	12,078	2,184	2,999
Germany	20,635	7,521	3,902	2,274
Holland	10,950	9,559	1,928	1,967
France	5,875	6,041	2,023	2,201
Spain and Canaries	27,821	20,372	8,709	6,464
Italy	20,348	21,662	5,581	6,400
United States	230,597	67,855	56,925	13,553
Australasia	20,091	26,643	6,076	8,435
British North America	16,737	18,061	3,533	5,179
Other countries	96,227	98,457	25,405	28,762
Total	501,695	321,355	128,264	87,030

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	52,424	62,038	16,772	15,064
Other countries	38,822	29,036	12,691	9,324
Total	91,246	91,074	29,463	24,388

Trade Notes.

THE HARGREAVES-BIRD PROCESS.—On Tuesday last a well-attended gathering of representatives of the Technical Press assembled at Farnworth at the works of the General Electrolytic Patent Co., Ltd., to view the working of the Hargreaves-Bird process for manufacturing bleach and soda by electrolysis. Since we last mentioned the subject, the owners of the patents have satisfied themselves on the various points which require time for demonstration and we understand the process will shortly be offered to the public. We shall have some remarks to make later, on the economic questions raised by the advent of the new comer.

NEW PUMPING STATION AT RAMSGATE.—A new pumping station for the Water Department of the Ramsgate Corporation was opened recently at Whitehall. The erection of the plant, which entailed many difficulties, has been executed under the immediate supervision of Messrs. W. and A. Valon, on whom it reflects great credit. Messrs. Paramor were the contractors.

DEATH FROM WOOLSORTERS' DISEASE.—At Bradford on Tuesday a coroner's jury inquired into a death from woolsorters' disease, and recommended that an inquiry be held by the Home Office into the best methods of prevention. The evidence showed that all known precautions had been adopted. This was the fourth death at the works from this disease. It is believed that the Home Secretary will order an inquiry.

ELEMENTS AND RUMOURS OF ELEMENTS.—A scientific discovery of interest is announced from Italy. Professor Nasini, of Padua, has communicated to the French Academy the result of his investigations with Signori Anderlini and Salvadori into the gases issuing from the earth in volcanic districts, among which they find coronium, hitherto known hypothetically only as a constituent of the sun. The announcement is, in the opinion of the discoverers, of the highest interest from a scientific point of view, as at once confirming the results of spectroscopic examination of the sun, and adding another proof of the substantial identity of materials in the sun and the earth. Coronium would seem to be a substance with a vapour density far smaller than that of hydrogen, which is by far the lightest body with which we are familiar. Some have suggested that it is only one of the elements known to us, modified in some unknown way by conditions differing enormously from those that obtain on this planet. But against this hypothesis has to be set not only its occurrence at a distance from the sun's body estimated at 300,000 miles, where it is difficult to believe that the vapours of the suggested elements can predominate, but also the fact that in the midst of solar disturbances in prominences or near sun spots, when the lines of hydrogen and other known elements are contorted, this coronal line remains sharp, fine, and straight.

MESSRS. ROBINSON, COOKS & Co.—We are advised that the partnership heretofore subsisting between Thomas Robinson, Thomas Cook, William Johnson Cook, Samuel Robinson, Benjamin Brown, and John Joseph Cook, carrying on business as engineers, ironfounders, and boiler makers, at the Atlas Foundry, St. Helens, in the County of Lancaster, under the style or firm of "Robinson, Cooks and Company," and at Widnes, in the County of Lancaster, under the style or firm of "The Widnes Foundry Company," has been dissolved by mutual consent as and from the thirtieth day of June, 1898, so far as regards the said Thomas Cook, who retires from the said partnership. All debts due to and owing by the said late partnership will be received and paid by the said Thomas Robinson, William Johnson Cook, Samuel Robinson, Benjamin Brown, and John Joseph Cook, who will continue the said business at the same places and under the same styles as heretofore.

THE MANCHESTER SEWAGE CASE.—At the Lancashire County Police Court on Wednesday, the summonses taken out by the Mersey and Irwell Joint Committee against the Manchester Corporation for penalties for breaches of the Mersey and Irwell Joint Committee Act, 1892, were again down for hearing. Mr. W. H. Wilson, representing the Joint Rivers Committee, said the Committee were now willing to grant the Corporation six months in which to take the necessary steps in the matter. They hoped it would be a solution of the difficulty.—The Town Clerk asked the magistrates to be good enough to give effect to what Mr. Wilson had said. He had stated the facts in such fair terms that, unless the bench desired it, he would not make any further observation.—Mr. Yates said the bench were very glad to hear that an arrangement had been come to which was satisfactory to both the parties. They hoped it would be carried out in a way equally satisfactory.—The summonses were then adjourned for six months.

OPENING FOR ALUMINIUM IN INDIA.—The most interesting and already somewhat successful attempt has been made to induce the natives of India to use domestic vessels made of aluminium instead of the heavier and more expensive copper and brass articles, which require to be frequently tinned. Mr. Chatterton, professor in the Madras Engineering College, desired to utilise the water-power of the famous Periyar Lake in the manufacture of aluminium, but was assured by the British company which hold the monoply and patents for the whole empire that the over-production in Europe would prevent their establishing a factory in India. On this, Mr. Chatterton took out a small quantity of aluminium to India, and had it manufactured into vessels of the popular native shapes in the art workshops of Madras. He has thus created a demand, which it requires a hundred workmen to supply. The manufacture of articles is being taken up by the outside bazaar, although aluminium ingots cost R3,000 a ton and the sheet-metal £3,300. Some beautiful work has been produced by native artists in their own designs. The lightness, the colour, and the solidity of the cooking-vessels attract all classes, although it may be long till the universal "lotah" or brass drinking-vessel is superseded. Still, the people of India, with whom kerosine tins are now so popular, offer the biggest market in the world for aluminium cooking-vessels.

Market Reports.

TAR AND AMMONIA PRODUCTS.

The position of benzols is as depressing as ever, both 90's and 50/90's being quoted at 10d. Other tar products are in a state of quietude. There is no change in carbolic acids. Naphthas are quietly steady. Pitch steady at 23s. to 24s. f.o.b. East Coast.

There has been a decided improvement in the position of sulphate of ammonia both for prompt and forward. Buyers seem to have realized that it was no use waiting any longer for prices to fall seriously. The sudden rush, together with the short production of the summer months has consequently hardened the market most markedly. Beckton value is now £9. 1 s. prompt, £9. 7s. 6d. Oct./Dec., and £9. 10s. Jan./Mar. London outside makes £9. 7s. 6d.; Liverpool £9. 7s. 9d.; Hull, £9. 6s 3d., and Leith, £9 7s. 6d. all prompt.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business as a whole is dull. The prices of caustic soda are without change at last week's quotations, viz.:—f.o.b. Liverpool, 77%, £8 5s.; 74%, £8.; 70%, £7. 2s. 6d.; 60%, £6. 2s. 6d. per ton, 10-ton lots. Soda ash is maintained at the convention price of £4. 2s. 6d. bags, f.o.r. makers' works. There is a fairly good demand for soda crystals and bicarbonate of soda. Chlorate of potash rather firmer at 3⅜d.; soda 3½d. to 3⅝d. per lb. For bleaching powder there is only little inquiry, and price unaltered at £5. 2s. 6d.

£5. 10s. hardwoods, f.o.b. Forward business over 1899 rted at £5. per ton Sulphur steady at £4. 10s., bulk, works. Saltcake firm at 25s, bulk, f.o.r. Sulphate per dearer at £16. 10s. f.o.b., with more inquiry. Potash, and carbonate, are in fair request. Carbonate, 90% at s. c.i.f. Brown acetate of lime is steady at £5. to £5. 2s. 6d. K. ports ; grey at £7. per ton. Acetate of soda rather firmer 12s. 6d. c.i.f. Acetic acids unchanged. White powdered irregular at £15. to £16 f.o.r. For aniline oil and salt prices dy. Carbolic acid crystals and liquid are in moderate demand ces firm. Borax still offers at low rates. Prussiate of potash t 6½d. per lb. Zinc chloride rather dearer. Ammonia salts Muriate, £17. Oxalic acid, 3¼d. to 3⅜d. per lb.

REPORT ON MANURE MATERIAL.

market continues quiet, but prices all round are very firm, there o important stocks in any department, and no pressure to sell. ss keeps doing in mineral phosphates for 1899 shipment at full

e is more inquiry for River Plate cargoes of bones, summer/autumn nt, and there are buyers at £4. 7s. 6d. delivered good, U.K. East Indian bone meal is firmer, and £4. 10s. per ton, ex quay, ool, is again asked for shipment. Nitrate of soda is firm at per cwt. for fine quality on spot.

IVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

S.—Palm oil is very firm, supplies are short, and holders demand that practically bring business to a standstill. There are no tions to record. Business in olive is limited for spot, while s are advancing in price. Linseed is steady, without change in Liverpool makes in export casks being quoted 18/- to 18/6. seed is rather quiet and there is not much doing, though Liver- fined continues to be offered at 15/9 to 16/3. Castor oil is slow and though the offerings are small, the demand is far from Good seconds Calcutta is quoted 3¼d. ; Madras 3 1/16d. ; and four first pressure French have been quoted in store at 3d. per lb. mand for Tallow is brisker, and sellers are firmer, but so far tions have been small. Resin is fairly well inquired for at rates, but buyers are slow to conclude business at present prices. of Turpentine are selling fairly well, holders being steady at wt. There is only a small business doing in petroleum at last quotations.

CES.—A firm tone has ruled in the market for American n linseed on the spot, and the quotation rather favours sellers ; roved demand has been experienced and fair sales have been ded to-day at £5. 12s. 6d to £6. 2s. 6d., whilst Liverpool makes ontinued to drag somewhat, only a retail trade having been done er rates, viz., £7. 5s. to £8. per ton, according to brand. A steady feeling rules for good to choice brands of American de- ted cotton seed, with sellers still quoting £5. 5s. to £5. 15s., ing to brand, but business thereat continues on only a very ite basis ; whilst there is a shade more inquiry going on for ool makes, both of decorticated and undecorticated, and recent are maintained at £6. to £6. 10s. for the former and £3. 17s. 6d. 10s. per ton for the latter, both according to brand. Spot of Egyptian are very steadily held for £3. 12s. 6d. per ton for quality, and there is a shade more inquiry going on thereat.

ULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

S.—Trade here in the oil milling way continues very depressed ; ore than one-third of the hands continue employed ; others of much employment until October. Probably the best- ed firms here are those engaged in corn milling, which industry ing large proportions, this port fast becoming a centre for this y. The principal imports here, compared with those of the me a year ago, are :—Wheat, 1,459,636 qrs. against 1,297,025 linseed 173,066 qrs. against 341,844 qrs ; rapeseed, 40,671 qrs., 52,954 qrs.; cottonseed, 116,551 tons, against 117,486 tons ; eed, 45,711 cwts., against 27,164 cwts. ; oil cake, 8,319 tons, 6,751 tons ; olive oil, 3,584 tuns against 3,065 tuns. Lineeed rm at 15s. 10½d. to 16s. spot naked ; forward, August, 15s. 10½d. ir months, 15s. 1½d. to 15s. 3d. per cwt.; boiled and refined, £1. 10s. per ton extra. Refined cotton oil quiet, spot naked and to , 13s. 6d. ; forward Nov./April, 13s. 4½d. ; crude ditto, spot August, 13s. 6d. per cwt.; casks, £1., and ordinary barrels, s. per ton extra. Castor oil, extracted here, from 3⅜d. per lb. pressure ; 3 1/16d. per lb. for second pressure ; barrels and cases free. Resins, slow demand, and quoted from 4s. 6d. for common grades. Olive oils, from £30 per tun. Olive oil soaps continue to advance in rates, and quoted at £17. to £19. per ton, nett, c.i.f. here. Cod oils unchanged.

CAKES.—Market quiet, with little business passing. Linseed cakes very quiet, but steady, 95% pure, £7. to £7. 2s 6d. Oilcakes (linseed), £6. 2s 6d. ; Russians, £6. 15s. to £6 17s 6d. Cotton cakes, very little doing : best makes, £3 18s 9d. to £4 ; seconds, £3. 18s 9d. Rape cakes unchanged.

PAINTS.—Makers continue well employed, and have to resort to overtime for the execution of orders. Prices unchanged. Disinfecting powder : 5% carbolic, £3. ; 10%, £3. 10s. ; 15%, £4 ; 20%, £4s. 10s. per ton. Sanitary fluid, 10d. to 1s. per gallon Black varnish, £5 10s. per ton in barrels.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Closure for the annual industrial holidays of Glasgow and environs began on Thursday of last week, and by Friday evening the stoppage was complete. Resumption will assume its first stages to-morrow (Wednesday), but there are works here and there which will not fall into line for another week or more. Market indications are necessarily not nearly so well outlined as usual, but it is certain that there are no new features of any real importance. Sulphate of copper still holds to the rise, with the quotation now at £16. 10s. Sulphate of ammonia is altogether idle for the moment, but holders' views are pretty firm at a little over £9. for prompt Leith. No change in mineral oils or paraffins ; general chemicals much the same, that is, quiet, and oversea shipments still rather below those of average years.

Chief prices current are :—Soda crystals, £2. 5s. to £2. 12s 6d. nett Tyne, soda ash, 48/52°, £4. 2s. 6d. to £4. 15s. nett, Tyne ; white alkali, 48/52°, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 10s. to £5. nett, Glasgow ; caustic soda, white, 74° £8., 70/72° £7. 2s. 6d , 60/62° £6. 2s 6d , and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s od. nett, Tyne; saltcake, 25s. od.; borax, English refined, £14., and boracic acid, £24. nett, Glasgow ; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt casks, £6. 15s., nett, Liverpool ; bichromate of potash, 3¾d., nett, for Scotch and English deliveries (for export, 3½d. nett, f.o b. Glasgow) ; bichromate of soda, 3d. nett, for Scotch and English deliveries (for export, 2¾d. nett, f o.b. Glasgow) ; chlorate of potash, 3¼d. less 5%, Liverpool : nitrate of soda, 7s. 4½d to 7s. 7½d. ; sulphate of ammonia, about £9. 2s. 6d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port ; sulphate of copper, £16. 10s. less 5% Liverpool ; paraffin scale, hard, 1⅜d. to 1½d. per lb., soft, 1½d. per lb. ; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb ; paraffin spirit (naphtha), 6½d. to 7d. per gallon ; paraffin oil (burning), No. 1, 5¾d., and crystal, 6d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower) ; ditto (lubricating) 865° £4. 10s. to £5 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 4,400 bags cane unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

The market here continues quiet, and there is no new feature to report. Sulphur continues scarce at £5. per ton nett, while soda crystals are in fair demand at £2. 12s. 6d. per ton, gross weight, locally. Caustic quiet, at £7. 5s. to £7. 10s. per ton for 70% ; 76/77%, £8. 5s. to £8. 10s. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett ; do. hards, £5. 15s. per ton, nett ; caustic soda, 76/77% £8. 10s. and 70% £7. 10s. per ton, nett ; recovered sulphur, 2 cwt. bags, £5. 0s. per ton, nett ; soda ash, 48%, £4. per ton, nett ; do., 50%, £4. 2s. 6d. per ton, nett ; do., 52%, £4. 5s. per ton, nett ; alkali, 36%, £3. 12s. 6d. per ton, nett ; white alkali, 48%, £5. per ton, nett ; do., 50%, £5. 5s. per ton, nett ; do., 52%, £5. 10s. per ton, nett ; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett ; do., 1 cwt. kegs, £7. per ton, nett ; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett ; do., 100° Tw., £3. per ton, nett ; do., 140° Tw., £3. 7s. 6d. per ton, nett ; soda crystals, casks, £2. 12s. 6d. per ton, gross weight ; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight ; pearl hardening, £3. per ton, nett ; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett ; blanc fixe, £7. 5s. per ton, nett ; chloride of barium, refined crystals, £6. 15s. per ton, nett ; sulphide of barium crystals, £4. 15s. per ton, nett ; carbonate of alumina, £30. per ton, nett ; aluminate of soda, £30. per ton, nett.

South Durham Salt.—There is no change to report in this article.

COALS.—The coal market continues firm, fuel being extremely scarce. Best Northumbrian steam coals are 13s. to 13s. 6d. per ton, f.o.b., and small steam continue firm at about 6s. per ton. There is no change in manufacturing coals, and household coals are dull, as is usual at this season. Coke is steady at about 14s 3d. per ton, delivered on the Tees.

New Companies.

Caoutchouc Co., Ltd.—Capital £50,000. in £1. shares. This company has been formed to acquire and carry on the business of india-rubber manufacturers, carried on by H. Edmonds, J. E. Baxter, and G. E. Heyl-Dia, at Leyland, Lancashire, as the Caoutchouc Company. The subscribers to the memorandum of association are:—J. E. Baxter, Highfield, Leyland, Lancashire, rubber manufacturer; H. Edmonds, 39, Victoria-street, S.W., electrical engineer; G. E. Heyl-Dia, 236, Great Clowes-street, Manchester, electrical engineer; C. J. Beaver, Vernon Place, Leyland, engineer; T. Smith, 10, Moss Lane, Leyland, bookkeeper; W. S. Edelston, 7, Winckley-street, Preston, solicitor; J. Shutt, Holme House, Farington, near Preston, secretary. Registered office, Wheelton Lane, Leyland, Lancs.

Maponite, Ltd.—Capital £100,000 in £1. shares. This company has been formed to manufacture a substitute for rubber and to adopt an agreement with P. C. Foreman and F. E. Macmahon, and to manufacture, sell, and deal in goods, apparatus, and articles for use in sport or games, or in the manufacture, maintenance, and working of engines, railway and other carriages, wagons, machinery, etc. The subscribers to the memorandum of association are:—J. C. Holder, 15, Austin Friars, E.C., clerk; J. E Batson, 94, Lavender Grove, Dalston, clerk; G. W. McGhee, 13 and 14, Abchurch Lane, E.C., clerk; G. Masters, 138, Kennington-road, S.E., clerk; W. Olley, 18, Woodbridge-street, E.C., clerk; M. F. Bailey, 79, Gracechurch-street, E.C., accountant; J. D. Hodges, Lyndhurst Villa, Bowes Park, clerk.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 9th.

Acetic Acid—

Germany,	19 pks.	Argo S. S. Co
Holland,	100	R. W. Greeff & Co.
,,	50	Phillipps & Graves
,,	15	A. & M. Zimmermann

Acetone—

Germany,	£132	D. T. Domeier & Co.

Alkali—

France,	116 c.	J. Harrison
Germany,	30	J. Barber & Co.

Alumina Sulphate—

Germany,	£80	H. Wallace & Co.

Ammonium Bromide—

Germany,	£50	R. W. Greeff & Co.

Antimony Ore—

Canada,	289 t.	L. & I. D. Jt. Co.
Japan,	51	Watson's Wf., Ld.

Asbestos—

Italy,	£85	W. Newbold
,,	165	British Asbestos Co.
,,	500	Pickford & Co.
,,	63	London Asbestos Co.
,,	160	Cape Asbestos Co., Ld.
France,	25	Girard Frères
Italy,	145	Imperial Asbestos Co.

Barium Chloride—

Germany,	£60	Petri Brs.

Barytes—

Belgium,	83 brls.	O'Hara & Hoar
,,	19	W. Harrison & Co.
,,	54 cks.	J. L. Lyon & Co.
Holland,	115 pks.	W. Harrison & Co.
Germany,	48	J. L. Lyon & Co.

Bleaching Powder—

France,	£256	J. M Steel & Co.
Germany,	66 pks.	,,

Caoutchouc—

Germany,	16 c.	Wallace Brs.
,,	7	Clarke & Smith
,,	48	Hale & Son
Rangoon,	139	Stein Brs. & Co.
France,	21	Girard Brs. & Co.
,,	2	Procter Brs.
,,	1	L. & I. D. Jt. Co.
Germany,	214	,,
France,	1	T. H. Lee
Straits,	442	Huttenbach & Co.
E. Indies,	34	Stewart, Holt & Co.
France,	13	W. E. Cole
Straits,	540	Soundy & Sons
,,	175	Prop. Bull Wf.
Africa,	15	L. & I. D. Jt. Co.
Natal,	20	Prop. Bull Wf.
France,	8	Alder Lymington
Holland,	10	W. M. Smith & Sons

Castor Oil—

France,	30 brls.	Mordaunt Bros.
Belgium,	50	C. & E. Morton
,,	20	Phillipps & Graves
France,	32	,,
Italy,	14 cs.	Impl. Steam Users' Association

Caustic Potash—

France,	200 c.	Petri Brs.
Germany,	£180	J. M. Steel & Co.
France,	205	W. E. Cole

Chemicals (*otherwise undescribed*)—

France,	£59	Mory & Co.
,,	36	H. Ewald & Co.
Germany,	463	A. & M. Zimmermann
,,	20	P. Heydemann
Holland,	30	,,
,,	42	J. Barber & Co.
Belgium,	125	T. H. Lee
,,	30	T. Palmer
,,	80	Leach & Co.
Germany,	150	L. & I. D. Jt. Co.
U. States,	1 028	E. R. Swallow
France,	120	B. & F. Wf. Co.
Holland,	8	Petri Brs.
Belgium,	230	B. & F. Wf. Co.
,,	5	L. & I. D. Jt. Co
Germany,	10	R. W. Greeff & Co.

Copperas—

Germany,	£38	H. Wallace & Co.

Cream of Tartar—

Italy,	38 pks.	B. Jacob & Sons
Holland,	22	Kirkpatrick, Barr, & Co.
Spain,	10	F. C Devon & Co.
France,	7	J. W. Cook & Co.
Italy,	12	Fellows, Morton & Co.
France,	9	B. & F. Wf. Co.
,,	10	W C. Bacon & Co.
Spain,	40	Howes Brs. & Co.

Dyestuffs—

Alizarine

Spain,	13 pks.	Brit. Alizarine Co.

Argols

Italy,	45 pks.	Thames S. T. & L. Co.

Cochineal

Canaries,	40 pks.	W. M. Smith & Sons
,,	4	Fyffe, Hudson & Co.
,,	77	Swanston & Co.

Cutch

Straits,	200 pks.	Hoare, Wilson & Co.

Divi Divi

E. Indies,	177 pks.	Flack, Chandler & Co.

Extracts

Denmark,	10 pks.	Sorensen & Co.
Belgium,	15	Leach & Co.
U. States,	40	L. & I. D. Jt. Co.
France,	40	T. H. Lee
,,	97	Carey & Sons
Denmark,	2	M. D. Co.
U. States,	50	W. Burton & Sons

Gambier

Straits,	520 pks.	Prop. Hay's Wf.
,,	638	Beresford & Co.
,,	245	C. S. Lovell

Indigo

E. Indies,	4 chts.	P. Macfadyen & Co.
,,	4	R. Von Glehn & Sons
,,	21	L. & I. D. Jt. Co.
,,	6	H. J. Perlbach & Co
,,	5	Arbuthnot, Latham & Co

Myrabolams

E. Indies,	646 pks.	Hoare, Wilson & Co.
,,	2,612	H. J. Perlbach & Co.
,,	1,366	J. R. Francis & Co.
,,	1,100	Montgomerie & Workman

Shumac

Italy,	60 pks.	H. Johnson & Sons

Tanners' Bark

Holland,	40 t.	Hicks, Nash & Co.
Natal,	7	Anning & Cobb
,,	57	J. T. Rennie, Son & Co.
Belgium,	42	F. A. Huges
Natal,	12	A. & W. Nesbitt

Turmeric

E. Indies,	100 pks.	Soundy & Sons
,,	93 167 bgs.	Butler's Wf., Ld.

Dyestuffs (*otherwise undes.*)—

Natal,	875 t.	Flack, Chandler & Co.
France,	2	Flageollet & Co.
Ceylon,	1	G. R. Haller, Ld.
Holland,	61	Little & Johnston

Farina—

U. States,	75 pks.	W. Wingate & Co.
France,	50	R. G. Hall & Co
Italy,	6	C. Tennant, Sons & Co.
Holland,	25	Phillipps & Graves
Straits,	160	J. Owen
,,	655	W. Sargent & Co.
Germany,	41	R. Ulrich
Belgium,	840	E. & T. Pink

Glucose—

U. States,	400 pks.	400 c.	Fellows, Morton, & Co.
,,	661	950	L. & I. D. Jt. Co.
,,	400	863	Thames S. T. & L. Co.
,,	950	1,420	W. Grose & Co.
,,	400	2,256	A. E. Piggott
,,	149	898	Ldn. & Til Ltge. Co.
,,	200	1,337	L. Sutro & Co
Canada,	1,151	1,151	L. & I. D. Jt. Co.
U. States,	200	1,200	Lipton, Ld.
,,	300	1,630	Ohlenschlager Brs.
,,	50	300	C. Southwell & Co.
,,	100	600	Page, Son & East
,,	750	750	Trier, Meyer & Co.
Canada,	500	500	Barrett Tagant & Co.
,,	1,300	1,300	E. Thompson & Co.
U. States,	500	500	H. Hughes
,,	250	250	R. G. Hall & Co.
Canada,	250	250	,,
	1,000	1,000	,,
Canada,	100	100	Fellows, Morton & Co.
Germany,	100	100	Trier, Meyer & Co.

Glue—

Germany,	£106	M. D. Co.
,,	150	L. & I. D. Jt Co.
,,	263	Bennett S. S. Co.
Belgium,	844	J. Barber & Co.
Italy,	198	,,
France,	60	Burnett Brs. & Sons
,,	200	Hernu. Peron & Co.
N. Zealand,	18	Deering & Robottom
Holland,	16	Phillipps & Graves
Germany,	533	,,
France,	26	J. Harrison
Italy,	160	Sander & Knott
,,	105	Bryden & Co.
Germany,	28	Butler's Wf., Ld.

Glue Stock—

Germany,	362 bls.	W. Balchin, Ld.
Belgium,	97	Thomas & Sons
N. Zealand,	10	Deering & Robottom
Germany,	31	Hicks, Nash. & Co.
France,	40	J. Cooper

Glycerine—

France,	£40	J. L. Lyon & Co.
,,	350	H. Hill & Sons
Holland,	375	J. Barber & Co.

Guano—

Belgium,	7 t.	Pras Chkauer, & Co.

Gypsum—

U. States,	90 t.	J. B. White & Brs.

Infusorial Earth—

Germany,	50 t.	Hackett & Co.

Lead Acetate—

Germany,	15 pks.	F. Boehm

Manganese—

Germany,	14 t.	C. Hof & Co.
,,	11	Phillipps & Graves

Manure—

Germany,	30 t.	Phillipps & Graves
,,	50	F. W. Berk & Co., Ld.
Belgium,	5	G. S. N. Co.

Mercury—

Italy,	100 flsks.	H. Bath & Son
Spain,	5	J. H. Austin & Co.

Methyl Alcohol—

Germany,	30 dms	W. Izzard
,,	6	J. Norrenberg & Co.
France,	10	Lister & Biggs

Mica—

Canada,	£113	A. E. Piggott
E. Indies,	78	Hale & Son
,,	300	Donald, Gray, & Co.
,,	300	W. M. Smith & Sons
Germany,	7	Craven & Co.

Molasses—

U. States,	75 brls.	425 c.	M. Measday
,,	175	630	C. S. Anderson
,,	250	1,438	Hall & Co.
,,	99	544	Ohlenschlager Brs.

Ochre—

France,	22 cks.	
,,	30 pks.	Hemingway & Co.
Holland,	8	Phillipps & Graves
,,	12 cks.	,,
Germany,	4 pks.	Keller & Co.
Spain,	55	J. L. Lyon & Co.

Oxalic Acid—

Holland,	10 pks.	R. W. Greeff & Co.

Paraffin Scale—

U. States,	1,521 brls.	Anglo-American Oil Co., Ld.

Paraffin Wax—

U. States,	600 cs.	Anglo-American Oil Co., Ld.
,,	100 brls.	Palmer & Co.

Pearl Ash—

France,	120 c.	F. W. Berk & Co.,
Canada,	162	L. & I. D. Jt. Co.

Phosphate Rock—

Belgium,	242 t.	Lawes Chemical Manure Co.

Pitch—

France,	48 cks.	Poth, Hille, & Co.
N. Russia,	350 brls.	Fellows, Morton, & Co.

Platina Ore—

N. Russia,	£600	H. Grey, jnr.

Plumbago—

Italy,	60 brls.	J. Thredder, Son, & Co.
Germany,	62 cks.	S. Galloway
France,	4	Girard Brs.

Potassium Bicarbonate—

Holland,	8 cks.	A. & M. Zimmermann

Potassium Bisulphide—

Germany,	£25	R. W. Greeff & Co.

Potassium Bromide—

Germany,	£220	R. W. Greeff & Co.

Potassium Carbonate—

Belgium,	100 c.	F. Smith
Germany,	220	J. M. Steel & Co.
,,	12	H. H. Hendrick
France,	120	W. E. Cole

Potassium Oxychloride—

Germany,	£30	G. Boor & Co.

Potassium Permanganate—
Germany, 2 pks. Butler's Wf., Ld.
" 40 J. Norrenberg & Co.

Potassium Prussiate—
Holland, 40 pks. Blagden, Waugh. & Co

Potassium Sulphide—
Belgium, £23 P. Hecker & Co.
Holland, 32 J. Owen

Rosin—
U. States, 500 brls. H. Hill & Sons
" 500 F. & S. Chiesman & Co.
Holland, 3 cks. J. Owen

Saltpetre—
E. Indies, 678 bgs. Lucas & Spencer's Wf.
" 394 Perkins & Homer
" 320 Phillipps & Graves
Germany, 350 S. E. Rly Co.

Soap—
U. States, £400 W. Dixon
" 12 G. W. Wheatley & Co.

Soda—
Belgium, 160 c. H. Wallace & Co.
" 40 Leach & Co

Soda Ash—
U. States, 2,500 c. F. W. Berk & Co., Ld.

Sodium Bichromate—
Germany, 401 c. C. Tennant, Sons, & Co.

Sodium Hyposulphite—
Holland, 120 c. R. W. Greeff & Co.

Starch—
U. States, 550 pks. Beck & Pollitzer
" 550 R. G. Hall & Co.
" 950 W. G. Taylor & Co.
" 250 Oblenschlager Brs.
Italy, 189 C. Tennant, Sons, & Co
France, 24 E. Flageo'let & Co.
Belgium, 240 T. H. Lee
" 87 Union Ligc. Co., Ld.
Holland, 260 Becker & Wagner
U. States, 200 R. Bennett & Co
Holland, 30 Phillipps & Graves
U. States, 700 C. Tennant, Sons, & Co.
Belgium, 46 Taylor Brs.
" 90 Leach & Co.
" 260 Becker & Wagner
" 440 E. & T. Pink
" 523 F. Claydon & Co.
Holland, 50 Hernu, Peron, & Co.
" 1,223 cs. Little & Johnston
France, 465 pks W. E. Cole
Germany, 2,210 Horne & Co.
" 186 Seaward Brs., Ld.
" 400 cs. E. & T. Pink

Stearine—
U. States, 50 tcs. Wilsons & Furness Co.

Talc—
E. Indies, £179 A. B. Curtis & Co.
Germany, 18 Butler's Wf., Ld.

Tallow—
N. Zealand, 514 cks. Goad, Rigg, & Co.
" 10 L. & I. D. Jt. Co.
" 1 cs. "
U. States, 315 brls. Price's Candle Co.
" 213 tcs. Phillipps & Graves
N. Zealand, 222 cks. J. Owen
France, 28 bgs. Orient Co., Ld.
N. Zealand, 18 cks. Hicks, Nash, & Co.
" 4 Nat. Mort. & Agency Co.
" 185 Deering & Robottom
U. States, 100 tcs. W. Balchin
" 89 brls. Wilsons & Furness Co.
France, 400 bgs. G. Boor & Co.
" 1 ck. Atkin & Nesbit
" 42 N. Z. & M. A. Co.
" 119 Dalgety & Co.
" 299 N. M. & A. Co.
" 4 Deering & Robottom
" 89 J. Graves
" 17 Culverwell, Brooks, & Co.
" 45 Aust Meat. Co.
N. Zealand, 30 Union L. Co., Ld.
" 37 Hoare, Wilson, & Co.
" 30 Brown & Elmslie
" 10 J. Graves
" 15 Mills & Sparrow
" 60 Phillipps & Graves

Tar—
Germany, 100 brls. W. Beard & Son
N. Russia, 50 Prod. Broker's Co., Ld.
" 32 Linck, Moeller, & Co.

Tartaric Acid—
Holland, 6 pks. B. & F. Wf Co.
" 38 F. C. Devon & Co.
" 4 Kirkpatrick, Barr, & Co.

Ultramarine—
Holland, 20 cks. ——— ———
" 8 pks. Hernu, Peron, & Co.

Varnish—
U. States, 9 pks. P. M Johnson & Co.
Germany, 3 L. & I. D. Jt. Co.
" 12 Butler's Wf., Ld.

Verdigris—
France, 4 pks. B. & F. Wf. Co.

White Lead—
Holland, 20 pks. A. & M. Zimmermann
Belgium, 16 cks. J. L. Lyon & Co.
Holland, 25 pks. Wilkinson, Heywood, & Co.
Norway, 40 Burrell & Co.
Germany, 51 Randall Brs.
" 34 Taylor Brs.
Belgium, 46 T. & W. Farmiloe, Ld.

Wood Pulp—
Sweden, 272 pks. C. S. Lovell
Norway, 2,009 W. D. Cork
Sweden, 250 H. Raby & Mather
Germany, 1,100 E. J. & W. Goldsmith
Belgium, 33 J. W. Cook & Co.
" 2,535 Becker & Wagner
Norway, 160 "
" 875 Johnsen & Jorgensen
Germany, 22 Butler's Wf., Ld.
" 42 F. Claydon & Co.
U. States, 2,293 Pickford & Co.
Sweden, 135 M. D. Co.
Norway, 67 "
Germany, 50 C. S. Lovell
U. States, 873 W. D. Cork, jr.
Sweden, 60 Christophersen, Andrews, & Co.

Zinc Oxide—
Holland, 160 pks. Spies Brs. & Co.
Germany, 15 R. W. Greeff & Co.
" 63 J. Matton
Holland, 75 J. Owen
U. States, 200 M. Ashby, Ld.
Holland, 40 "

Zinc Sulphate—
Germany, £60 Burgoyne & Co.

LIVERPOOL.

Week ending July 7th.

Albumen—
Alexandretta, 10 cs.

Aniline Salts—
Rotterdam, 4 cks.

Asbestos—
New York, 2 pks. J. G. Burton

Bone Ash—
River Plate, 817 bgs. J. Nelson & Sons, Ld.

Bone Meal—
Rangoon, 110 bgs.

Bones—
Beyrout, 60 t. 251 bgs.
Mersyne, qty.

Castor Oil—
Leghorn, 30 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 10 cs.

Citric Acid—
Messina, 5 cks.

Colours—
Hamburg, 4 cs.
Stettin, 45 cks. Evans, Sons & Co.
Rotterdam, 180

Cream of Tartar—
Bordeaux, 33 cks
Tarragona, 15
Oporto, 10 Sachse & Klemm
Barcelona, 5 pks. "

Dyestuffs—
Cutch
Singapore, 1,000 bxs.
Rangoon, 1 O. Gillanders & Co.
" 1,110
Extracts
St. John's, N'fd., 76 cks.
Bordeaux, 32
Fiume, 250 brls.
Baltimore, 10
Antwerp, 2
Fustic
St. John's, Nfd., 6 t.
Gambier
Singapore, 684 bgs. 4,076 bls.
Saffron
Valencia, 1 cs.
Shumac
Palermo, 4,400 bgs.
Valonia
Smyrna, 101 t. 442 bgs.

Dyestuffs *(otherwise unnes.)—*
Baltimore, 288 bgs.
Antwerp, 216

Glue—
Rouen, 12 cks. 80 pks.
Rotterdam, 100 bgs.

Limestone—
Antwerp, 1 cs. J. T. Fletcher & Co.

Paint—
Trieste, 56 pks.
Baltimore, 30 cs. J. Nickels & Co

Paraffin Scale—
Baltimore, 100 brls.

Phosphate—
Ghent, 500 t.

Phosphorus—
Hamburg, 50 cs

Plumbago—
Genoa, 80 bgs.

Potash—
Dunkirk, 19 dms. Bancroft & Co.
" 118

Pumice Stone—
Messina, 12 cks.
Leghorn, 18 cs.

Pyrites—
Huelva, 7,040 t. Matheson & Co.
Leghorn, 394 bgs.

Rosin—
Savannah, 5 212 brls.
Baltimore, 1,495

Saltpetre—
Calcutta, 1,819 bgs.
Hamburg, 2 cks.

Soap—
Newport News, 981 brls.
N. Orleans, 1,368
Smyrna, 350 bxs.
New York, 1 cs.
Genoa, 279 R Mills & Co.
Naples, 155

Soapstone—
Genoa, 180 bgs.

Starch—
Boston, 300 sks. Colby & Co.
" 250
Baltimore, 200 bgs.
Antwerp, 220 cs. J. T. Fletcher & Co.
" 20

Stearine—
Rouen, 13 bgs. Co-op. W'sale Society, Ld.

Sulphur—
Catania, 2,039 bgs.

Tallow—
New York, 700 tcs. 30 brls. 50 hds.
Boston, 236
Philadelphia, 200
River Plate, 546 pps. J. Nelson & Sons, Ld
Montreal, 192 brls. J. Nickels & Co.

Tartaric Acid—
Messina, 8 cks.

Turpentine—
Savannah, 750 brls.

Wood Pulp—
New York, 184 cs. Lever Brs., Ld.
Montreal, 1,674 bdls. A. Rice & Co.
Rotterdam, 190 bls.
Gothenburg, 68 R. L. Lundgren
" 43 L. & N. W. Rly.
" 100 W. Johnston & Co.

Zinc Oxide—
Rotterdam 20 cks.
Antwerp, 40 brls.

MANCHESTER.

Week ending July 9th.

Acetate of Lime—
New York, 1,802 bgs.
Rouen, 77

Alizarine—
Rotterdam, 1 bx.

Ammonium Acetate—
Rotterdam, 5 brls.

Antimony Oxide—
Hamburg, 2 cks.

Asbestos—
Rotterdam, 16 crts.

Barytes—
Antwerp, 15 pks.
Rotterdam, 20 cks.

Caustic Potash—
Antwerp, 20 dms.

Cement—
Ghent, 1,000 bgs.

Chemicals *(otherwise undescribed)*
Hamburg 5 cks.
Rotterdam, 6

Coal Products *(otherwise undes.)—*
Treport, 20 dms.

Colours—
Antwerp, 7 cks.
Hamburg, 2 cs.
Rotterdam, 28 30 15 pks. / 74 brls. 9 bxs.
Rouen, 6 cks.

Extracts—
Antwerp, 6 brls.
Halifax, 110 cks. Boutcher, Mortimore, & Co.

Farina—
Hamburg, 140 bgs.
Rotterdam, 1,730

Glucose—
New York, 1,000 brls.

Glue—
Antwerp, 2 bls.
Hamburg, 10 bgs. 10 bskts.
Rotterdam, 45
Rouen, 26 cks. 31 bls.

Gelatine—
Antwerp, 20 bls.

Indigo—
Rotterdam, 3 cks. 7 chts.

Lead Acetate—
Hamburg, 4 cks.

Lead Chloride—
Hamburg, 2 cks.

Limestone—
Antwerp, 4 cs. J. T. Fletcher & Co.
" 7
" 3 crts.

Litharge—
Hamburg, 40 cks.

Logwood—
Mexico, 640 t.

Ochre—
Rotterdam, 3 cks.

Oxalic Acid—
Rotterdam, 1 kg.

Potash—
Hamburg, 14 cks.
Rotterdam, 39
Rouen, 4
Treport, 20 dms.

Soda Crystals—
Rouen, 10 cks.

Sodium Acetate—
Rouen, 17 cks.

Sodium Bicarbonate—
Rotterdam, 20 cks.

Sodium Phosphate—
Antwerp, 15 cks.

Starch—
Antwerp, 190 cs.
Hamburg, 780
New York, 300 sks.
Rotterdam, 122

Tallow—
Rotterdam, 100 tcs.
Treport, 28 cks.

Tartaric Acid—
Rotterdam, 20 cks.

Tar Waste—
Rotterdam, 6 cks.

Tin Chloride—
Antwerp, 1 ck.

Ultramarine—
Hamburg, 1 ck. 2 cs.

Waste Salt—
Hamburg, qty.

Wood Pulp—
Gefle, 3,500 bls.
Greenpond, N'fld., 18,295
Hamburg, 713
Skutskar, 1,458

Zinc Ashes—
Antwerp, 15 cks.

Zinc Oxide—
Antwerp, 20 cks. / 20 brls. 15 cs.

HULL.

Week ending July 9th.

Acids—
Ghent, 40 crbys. Wilson, Sons, & Co., Ld.
Leghorn, 21 cks. "

Antimony—
Leghorn, 28 cks.

Barytes—
Antwerp, 17 cks. Bailey & Leetham, Ld.
" 71 H. F. Pudsey
" 59 Wilson,
" 200 bgs. Sons, & Co., Ld
Rotterdam, 88 cks. Hutchinson & Son

Bitumen—
Marseilles, 38 cks. Wilson, Sons, & Co., Ld.

Bone Meal—
Bombay, 100 bgs.

Castor Oil—
Genoa, 10 cs. Wilson, Sons, & Co., Ld.
Leghorn, 35 "
" 5

Chemicals *(otherwise undescribed)*
Antwerp, 212 pks Wilson, Sons, & Co., Ld.
Hamburg, 41 cks. "
Marseilles, 1 cs. "
" 1 ck.

Colours—
Antwerp, 1 cs Hanger, Watson, & Harris
" 15 cks. Wilson, Sons, & Co., Ld
Genoa, 2 brls.
Ghent, 22 cks. "
Hamburg, 3 cs. "
Rotterdam, 1 bx. 43 pks. 2 cks. Hutchinson & Son
Stettin, 30 Wilson, Sons, & Co., Ld.

Cream of Tartar—
Rotterdam, 2 cks. Hutchinson & Son

Cryolite—
Copenhagen, 1 ck. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 19 pks. 4 bxs. 2 brls. Hutchinson & Son
Extracts
Marseilles, 12 cks.
Myrabolams
Bombay, 3,760 bgs.
Valonia
Smyrna, 603 t.

Dyestuffs *(otherwise undes.)—*
Hamburg, 30 bgs. Wilson, Sons, & Co., Ld.
Rotterdam, 2 cks. Hutchinson & Son

Farina—
Stettin, 800 bgs. Wilson, Sons, & Co., Ld.

Glucose—
New York, 60 tcs. Wilson, Sons, & Co., Ld.
" 500 brls.

Glue—
Hamburg, 45 bgs. Wilson, Sons, & Co., Ld.

Glue Stock—
Marseilles, 8 bls.

Guano—
Rotterdam, 795 bgs. Hutchinson & Son

Glycerine—
Marseilles, 6 dms.

Kaolin—
Rotterdam, 115 bls. Hutchinson & Son

Lead Acetate—
Hamburg, 2 cks. Wilson, Sons, & Co., Ld.

Lithopone—
Amsterdam, 2 cks. W. & C. L. Ringrose

Ochre—
Bremen, 2 cks. Veltmann & Co.
Marseilles, 27
Rouen, 7 Rawson & Robinson

Paint—
Marseilles, 16 cs. Wilson, Sons, & Co., Ld

Potash—
Dunkirk, 40 dms. Wilson, Sons, & Co., Ld.

Pumice Stone—
Leghorn, 30 pks. Wilson, Sons, & Co., Ld.
" 32

Soap—
Naples, 39 cs. Wilson, Sons, & Co., Ld.

Soda—
Amsterdam, 135 bgs. Hutchinson & Son
Antwerp, 3 cks. Wilson, Sons, & Co., Ld.
Ghent, 305 bgs. "

Starch—
Amsterdam, 80 bxs. Hutchinson & Son
Antwerp, 120 cs. Bailey & Leetham, Ld.
" 70 Wilson, Sons, & Co., Ld.
Bremen, 187 Veltmann & Co
Dunkirk, 50 bgs. Wilson, Sons, & Co., Ld
Ghent, 266 cs. "
Rotterdam, 55 Hutchinson & Son

Stearine—
Antwerp, 12 bgs. Wilson, Sons, & Co., Ld.
New York, 50 tcs. "

Tallow—
Dunkirk, 267 cks. Wilson, Sons, & Co., Ld.

Tar—
Danzig, 18 brls. Wilson, Sons, & Co., Ld.

Tartar—
Bordeaux, 10 cks. Rawson & Robinson

Tartaric Acid—
Rotterdam, 26 cks. Hutchinson & Son
" 5 W. & C. L. Ringrose

Turpentine—
Bordeaux, 20 cks. Rawson & Robinson

Ultramarine—
Rotterdam, 12 cks. Hutchinson & Son
Bremen, 12

Waste Salt—
Hamburg, 50 bgs. Wilson, Sons, & Co., Ld.

White Lead—
Amsterdam, 37 cks. Hutchinson & Son
Antwerp, 45 Bailey & Leetham, Ld.
Rotterdam, 41 Hutchinson & Son

Wood Pulp—
Christiania, 1,212 bls. Wilson, Sons, & Co., Ld.
Drontheim, 1,920 "
Gothenburg, 270 "

Zinc Oxide—
Antwerp, 29 cks. Bailey & Leetham, Ld.
Rotterdam, 20 Hutchinson & Son

Zinc Sulphate—
Rotterdam, 1 brl. Hutchinson & Son

Zinc White—
Rotterdam, 50 cks. Hutchinson & Son

GLASGOW.

Week ending July 14th.

Acetic Acid—
Rotterdam, 7 cks. 15 carboys J. Rankine & Son

Albumen—
Hamburg, 4 cks.

Alum Earth—
Hamburg, 17 cks.

Alumina Sulphate—
Rotterdam, 31 cks. J. Rankine & Son

Aniline Salts—
Rotterdam, 10 cks. J. Rankine & Son

Asbestos—
Rotterdam, 6 bls. J. Rankine & Son

Barium Sulphate—
Antwerp, 550 bgs.

Bleaching Powder—
Rotterdam, 100 cks.

Castor Oil—
Antwerp 56 cks.

Caustic Potash—
Hamburg, 13 dms.

Chemicals *(otherwise undescribed)*
Hamburg, 3 cs.

Colours—
Hamburg, 2 cks
Rotterdam, 100 pks. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 13 cks. 20 brls. J. Rankine & Son
Aniline
Rotterdam, 1 cs.
Aniline Colours
Rotterdam, 4 cks. 1 cs. J. Rankine & Son

Dyestuffs *(otherwise undescribed)*
Antwerp, 152 bgs.

Farina—
Delfszyhl, 400 bgs. J. Rankine & Son

Glucose—
New York, 160 brls.

Glue—
Boston, 40 brls.
Antwerp, 10 cks. 7 bls.

Ochre—
Rotterdam, 17 cks. J. Rankine & Son

Potash—
Montreal, 33 brls.
Rotterdam, 42 cks. J. Rankine & Son
Hamburg, 10

Rosin—
New York, 505 brls.
Savannah, 3,205 Rowley & Dick

Soap—
New York, 200 brls. 5,000 bxs.

Starch—
Montreal, 500 bgs.
New York, 400 sks.

Stearine—
Amsterdam, 68 bgs.

Tannin—
Hamburg, 1 ck.

Tartar—
Hamburg, 4 cks.

Turpentine—
Savannah, 1,650 cks. Rowley & Dick

Ultramarine—
Antwerp, 12 cs.

Varnish—
Antwerp, 2 cks. 1 cs.
New York, 10 brls.

Waste Salt—
Hamburg, 63 t.

White Lead—
Rotterdam, 30 cks. 51 pks. J. Rankine & Son

Wood Pulp—
Gothenburg, 51 bls. 1 roll 4 bdls.
Rotterdam, 50 J. Rankine & Son
Drontheim, 200
New York, 90 rolls.
Christiania, 3,174 bls.

Zinc Ashes—
Antwerp, 2 cks.

Zinc Sulphate—
Gothenburg, 20 bgs.

Zinc White—
Rotterdam, 10 pks. J. Rankine & Son

TYNE.

Week ending July 9th.

Acids—
Antwerp, 30 cks. Tyne S. S. Co.

Ammonium Chloride—
Rotterdam, 2 cks. Tyne S. S. Co.

Antimony Ore—
Antwerp, 2,200 bgs. Tyne S. S. Co.

Asbestos—
Rotterdam, 6 bls. Tyne S. S. Co.

Barytes—
Rotterdam, 100 bgs. Tyne S. S. Co.

Colours—
Antwerp, 3 cks. Tyne S. S. Co.
Hamburg, 1 cs. "

Dyestuffs *(otherwise undescribed)*
Rotterdam, 60 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 12 crts. Tyne S. S. Co.

Salt—
Hamburg, 50 t.

Saltpetre—
Hamburg, 210 t. Bede Metal Co.

Soapstone—
Hamburg, 11 tins Tyne S. S. Co.

Starch—
Rotterdam, 104 cs. Tyne S. S. Co.

Superphosphate—
Antwerp, 1,850 bgs. Tyne S. S. Co.

Wood Pulp—
Rotterdam, 50 bls. Tyne S. S. Co.

Zinc Ashes—
Antwerp, 1 ck. Tyne S. S. Co.

Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending July 6th.

Acetic Acid—
Rotterdam, 2 cs.

Alizarine—
Rotterdam, 45 brls. 1 cs.

Alkali—
Calais, 4 cks.

Antimony—
Boulogne, 1 ck.

Barytes—
Hamburg, 10 bgs.

Colours—
Hamburg, 49 cks. 2 cs.
Rotterdam, 7

Dyestuffs *(otherwise undescribed)*
Antwerp, 350 bgs.
Boulogne, 13 cks. 2 cs.
Rotterdam, 389 79
Hamburg, 24 t.

Farina—
Delfszyhl, 445 bgs.

Madder—
Rotterdam, 5 cks.

Ochre—
Calais, 37 cks.

Phosphates—
Calais, 1,540 bgs.

Potash—
Calais, 10 dms.

Pyrites—
Seville, 920 t.

Rosin—
Brunswick, 4,150 brls.

Saltpetre—
Hamburg, 20 cks.
Rotterdam, 100 bgs.

Size—
Hamburg, 1 ck.

Soda—
Rotterdam, 17 dms.

Starch—
Ghent, 355 bxs.
Rotterdam, 10 cs.

Tartaric Acid—
Rotterdam, 10 cks.

Waste Salt—
Hamburg, 177 cks. 270 t.

Wood Pulp—
Rotterdam, 56 bls.

GRIMSBY.

Week ending July 9th.

Barytes—
Hamburg, 100 bgs.

Colours—
Antwerp, 3 cks. 12½ pks.
Hamburg, 21 3 cs. 18
Rotterdam, 5

Plumbago—
Hamburg, 1 ck.

Size—
Antwerp, 5 pks.

EXPORTS OF CHEMICAL PRODUCTS

AT

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 13th.

Acids—
Durban, 10 cs. £20

Ammonia—
E London, 1 cs. £21
Cologne, 19 c. 24

Anhydrous Ammonia—
Rotterdam, 20 cylders. £60

Ammonium Carbonate—
Adelaide, 12 c. £20
Lisbon, 15 26
Santos, 10 cs. 45
New York, 25 kgs. 35
Bordeaux, 3 t. 6 c. 80

Ammonium Chloride—
Galatz, 1 t. £33

Ammonium Sulphate—
Marseilles, 16 t. 4 c. £153
Hamburg, 200 1,840

Arsenic—
Sydney, 1 t. £70

Bisulphite of Lime—
Calcutta, 18 c. £13

Borax—
Fremantle, 6 c. £1 1
Perth, 20 kgs. 1 5
Harlingen, 6 1 7
Sydney, 110 7 7
Adelaide, 1 t. 1 4

Carbonic Acid Gas—
Channel Is., 39 tubes £15

Caustic Potash—
Sydney, 1 t. 1 c. £15

Caustic Soda—
Hong Kong, 1 t. 11 c. £28
Delagoa Bay, 9 6

Chemicals *(otherwise undescribed)*
Sydney, 70 pks. £405
Bundaberg, 21 cks. 151
Boulogne, 1 cs. 17
Perth, 52 200
Dusseldorf, 17 46
Rio de Janeiro, 2 11
Quebec, 16 dms. 16
Adelaide, 6 11
Rotterdam, 10 kgs. 38 157
Lisbon, 8 cs. 21
St. John's, N.B., 12 27

Citric Acid—
Colombo, 1 c. £7
Galatz, 7 44
Braila, 4 25
St. Petersburg, 10 kgs. 1 68
Hamburg, 22 pks. 193
Rotterdam, 1 t. 2 120
Bombay, 2 14
Durban, 2 10

Coal Products—

Aniline
Pt. Elizabeth, 1 cs £27
New York, 15 dms. 400

Aniline Oil
Rotterdam, 12 dms. £400

Anthracene
Cologne, 491 cks. £1,313

Benzine
Melbourne, 365 dms. £236
Durban, 1 cs. 6

Benzol
Antwerp, 5 dms. 35
Boulogne, 155 cks. 400

Carbolic Acid
Boulogne, 49 cks. £80
Antwerp, 4 cs. 6
Philadelphia, 20 167
Calcutta, 16 dms. 6

Creosote
New York, 1,000 cks. £706
St. Malo, 22,600 galls. 2 3

Naphtha
Melbourne, 50 dms. £31
Sydney, 55 275

Naphthaline
Antwerp, 151 bgs. £32
Pt. Elizabeth, 8 cks. 22
Rouen, 51 30

Pitch
Sydney, 15 frks. 5 brls. £16
Hochfeld, 224 t. 357
Helsingfors, 150 169
Hamburg, 100 180
Antwerp, 820 1,015
Alexandria, 300 21 2
Halifax, 114 cks. 26 3
Stockholm, 100 4 5

Pyridine Bases
Cologne, 10 dms. £318

Tar
Pt. Elizabeth, 120 dms. £9
Durban, 100 100 rnlts. 66
St. Petersburg, 900 brls. 500
Trinidad, 10 6
Antwerp, 50 32
Stettin, 960 cks. 480
Gothenburg, 60 48
Helsingfors, 1,449 687

Coal Products *(otherwise undes.)*—
Durban, 50 dms. £7

Copper Sulphate—
Varna, 13 c. £10
Malaga, 27 t. 412
Paris, 25 395
Danzig, 10 166
Bordeaux, 9 149
Ghent, 15 240
Pt. Elizabeth, 18 15

Cream of Tartar—
Hobart, 10 c. £44
Melbourne, 1 t. 72
Launceston, 1 77
Durban, 5 19
Wellington, 18 64

Disinfectants—
Sydney, 200 dms. 64 cs. £143
Jamaica. 90 58
Montreal, 12 pks. 36
Durban, 3 10

Glycerine—
New York, 30 t. 17 c. £82

Manure—
Dunedin, 100 t. £250
Townsville, 2 3
Uerdingen, 20 12 c 80
St. Kitts 32 72
Riga, 207 8 430
Pt. Elizabeth, 112 bgs. 135

Oxalic Acid—
Melbourne, 3 cks. £33

Potash—
Brussels, 10 c. £116
Hamburg, 2 t. 80

Potash Salts—
Auckland, 18 t. 3 c. £1,340

Potassium Bichromate—
Stettin, 7 c. £12

Potassium Carbonate—
Adelaide, 12 c. £14

Potassium Cyanide—
Fremantle, 7 t. 8 c. £667
Townsville, 10 14 1,300
Pt. Elizabeth, 4 410
New York, 50 cks. 220 cs. 1,143

Potassium Prussiate—
Danzig, 37 cks. £636

Saltpetre—
Durban, 11 c. £11
Bahia, 11 t. 227
Pt. Elizabeth, 13 14
Pt. Said, 5 7 83
Santos, 6 6 90

Sheep Dip—
Tunis, 20 dms. £6
Durban, 1,030 4 cs. 225
Cape Town, 5 t. 12 c. 125
B. Ayres, 15 8 532
Pt. Elizabeth, 5 11 210

Soda—
Gibraltar, 1 t. 12 c. £5

Soda Crystals—
Adelaide, 5 t. £16
Pt. Elizabeth, 4 16 c. £15

Sodium Acetate—
Sydney, 2 t. 8 c. £48

Sodium Bicarbonate—
Wellington, 3 t. £18

Sodium Prussiate—
Danzig, 5 t. £229

Sodium Silicate—
Christchurch, 5 t. 8 c. £19

Sulphur—
E. London, 15 cks. 76 kgs. £23

Sulphuric Acid—
Durban, 25 cs. £19
Pt. Elizabeth, 25 17
Penang, 3 t. 4 c. 14

Superphosphates—
Lyttelton, 100 t. £ 94

LIVERPOOL.

Week ending July 13th.

Acetic Acid—
Bombay, 16 c. £9
Lisbon, 12 brls. 12

Alkali—
Lisbon, 29 t. 14 c. 2 q. £120
Valencia, 13 16 55
Genoa, 30 135
Calcutta, 10 3 40
Brisbane, 2 1 3 12
Smyrna, 12 75

Alum—
Alexandria, 7 t. £35
Smyrna, 3 11 c. 19
Stockholm, 4 20
Malta 1 5
Madras, 6 19 3 q. 39
Penang, 1 10 9
Canea, 1 1 5
Oporto, 5 5 25
Constantinople, 7 4 34
Piræus, 3 1 1 14
Lyttelton, 1 6

Alumina Sulphate—
Boston, 10 t. 7 c. £41

Aluminous Cake—
Calcutta, 50 t. 10 c. 3 q. £116

Ammonia—
Santos, 5 c. £6

Ammonium Carbonate—
Copenhagen, 1 t. £26
Trieste, 5 cks. 10
Rangoon, 18 c. 27
Hamburg, 17 26
Rotterdam, 11 12

Ammonium Chloride—
Smyrna, 12 c. 3 q. £22
Naples, 4 cks. 47
Ancona, 5 18
Trieste, 2 58

Ammonium Sulphate—
Tegal, 98 t. 15 c. 1 q. £985
Valencia 189 5 1,771
Palermo, 23 13 228
Philadelphia, 50 475
Nantes 8 81
Leghorn, 380 bgs. 360
Las Palmas, 53 5 572
Teneriffe, 25 2 2 230
Malaga, 20 6 190
Gd. Canary, 17 16 175

Arsenic—
Naples, 11 cks. £24

Barium Chlorate—
Oporto, 3 c. £9

Basic Slag—
Granville, 490 t. £320

Bleaching Powder—
Bombay, 10 cs.
Boston, 493 cks.
East St Louis, 21 54 pks.
Genoa, 31 84
Milan, 28
Mitylene, 108
Monterey, 20 brls.
Naples, 36
Newport News, 429
New York, 561
Oporto, 25
Patras, 5
Philadelphia, 292
Toronto, 10
Vera Cruz, 139
Baltimore 10 t. 13 c. £76

Bone Ash—
Montreal, 1 t. 8 c. £19

Boracic Acid—
Antwerp, 10 c 3 q. £27
Montreal, 1 t. 17 50
St. John's, 1 1 q. 2
Shanghai, 19 2 23

Borax—
Ghent, 1 t. 17 c. 3 q. £19
Sydney, 5 10 81
Callao, 1 13
Toronto, 12 19 3 175
Stettin, 15 8 214
Rotterdam, 6 91
Montreal, 4 9 1 61
Hamburg, 1 1 15
Lisbon, 2 1 2 30
Amsterdam, 2 28
Vera Cruz, 1 3 14
Tampico, 1 3 3 14
Melbourne, 7 97
Antwerp, 1 9 3 22

Calcium Chloride—
Calcutta, 2 t. 2 c. £4
Sydney, 3 3 7
Melbourne, 5 13
New York, 14 17 30

Carbolic Acid—
Hamburg, 9 t. 16 c. £626
Reval, 2 11 187
Toronto, 6 1 q 17

Caustic Potash—
Baltimore, 10 t. 1 c. £287

Caustic Soda—
Alexandria, 58 dms.
Bahia, 30
Barcelona 80
Bari, 18
Barranquilla, 6
Bombay, 10
Boston, 50
Bourgas, 11
Brisbane, 30
B. Ayres, 235
Calcutta, 98
Cavalla, 4
Ceara, 60
Chicago, 50 310 pks.
Gefle, 23 brls.
Genoa, 73
Hiogo, 87
Ibrail, 35
Johannesburg, 8
Leghorn, 45
Madrid, 80
Maranham, 15
Melbourne, 75
Messina, 20
Monterey, 30
M. Video, 25
Montreal, 50
Naples, 17
New York, 325
Odessa, 225
Oporto, 48
Para, 6
Parnahyba, 20
Pernambuco, 184
Progresso, 45
Rangoon, 2
Rio G. Do Sul, 203
Rotterdam, 40 59 5 cks.
Seville, 420
Sydney, 10
Talcahuano, 25
Toronto, 50
Trieste, 18
Tunis, 7
Vigo, 5
Woodstock, 30

Chemicals (*otherwise undescribed*)

B. Ayres	5 t.	8 c.	1 q.	£27
Volo,	1	1		38
Hamburg,		6	2	5
Rotterdam,	6	10		87
Stettin,		10		14
Marseilles,	4	18	2	313
Sydney,	2			28
Brisbane,	2			28
Barcelona,	11	2	3	138
Philadelphia,	13	7		353
Bombay,		10	3	29
Bluefields,		2	2	12
Valparaiso,		30 bxs.		12
Genoa,	8 cks.	10 cs.		20
Melbourne,	8½ trcs.			7
Madras,		5 brls.		24
Constantinople,		25		82

China Clay—

Baltimore,	195 t.
Bombay,	125
Barcelona,	20 cks
Boston	10 c.
Calcutta,	460
Georgetown,	100
Melbourne,	42
Naples,	40
Pernambuco,	40
Philadelphia,	250
Piræus,	220 bgs.
Vera Cruz,	30

Coal Products—

Aniline Oil

Boston,	5 dms.
Buda Pesth,	10
Philadelphia,	1 ck. 27
Valleyfield,	4

Aniline Salts

Valleyfield,	40 cs.

Creosote

Malmo,	30 brls.

Creosote Oil

Bordeaux,	350 cks.
B. Ayres,	20 brls.

Creosote Salts

Antwerp,	13 t. £25

Pitch

Antwerp,	55 t.
Cette,	295
Volo,	10 brls.

Tar

Antwerp,	35 t. 14 c.	
B. Ayres,	20 cks.	70 kgs.
Galatz,		105
Ibrail,		10 brls.
Para,		60

Copperas —

Canea,	1 t.	19 c.	£5
Galatz,	2	6	6

Copper Sulphate—

Cette,	187 t.			£2,700
Galatz,	3	5 c.		53
Porto Alegre,	2	9		40
Ghent,	33	14	3 q.	449
Christiania,	1			23
Catania,	5		2	81
Bordeaux,	140	2		2,252
Rotterdam,	2	18	3	43
Stettin,		18		15
Konigsberg,	3		1	47
M. Video,	4	12	1	75
Genoa,	15			231
Trieste,	10	1		164
Bombay,	1	5		20

Cream of Tartar—

Victoria, B.C.,	1 c.		£5
Honolulu,	3	3 q.	9

Disinfectants—

Calcutta,	1 t. 9 c.	£35
Baltimore,	50 cks.	

Dried Blood—

Dunkirk,	9 t. 4 c.	£65
Las Palmas,	10 2	77

Dyestuffs—

Aniline Colours

Bombay,	2 cs.	
Boston,	1 ck.	1 kg.
Montreal,		3
New York,	15	36 dms.
Shanghai,	100	

Extracts

Boston,	5 cks.	25 brls.
New York,	26	

Logwood

Alexandria,	100 bgs.
Eureka,	20 logs.

Dyestuffs (*otherwise undescribed*)

Boston,	125 cks.
Genoa,	158 ps.

Glycerine—

Piræus,	1 t.	£60
Salonica,	6 c.	18
Calcutta,	1	60
Maranham,	5	18

Magnesia—

Syra,	1 dm.

Magnesium Sulphate—

Alexandria,	40 kgs.
Mauritius,	100
Timatave,	30

Manure—

B. Ayres,		12 cs.	£20
Montserrat,	15 t.	5 c. 1 q.	29
Las Palmas,	23		146
New York,	99	9	1,393
Teneriffe,	5		15

Oxalic Acid—

Boston,	6 t.	16 c.	1 q.	£188

Paint—

Bahia,		12 cks.
Barbadoes,		4
Barranquilla,	5 bls.	
Bombay,	21 dms.	
Bordeaux,	14 tins.	
B. Ayres,		19 cs.
Calcutta,	14 pks.	
Campeche,	150	
Constantinople,	109	
Curacao,	136 kgs.	
Coquimbo,		20
Degama,	2	
Gibraltar,	50	
Honolulu,		10 brls.
Lisbon,	21	
Maracaibo,	989	1 ck.
Middleburg,	29 dms.	
Panama,		15
Para,		4
Pt. Natal,	20	
Savanilla,	60	
Smyrna,	50	
Talcahuano,	35	

Painter's Colours—

Antwerp,	5 cks.		
Bahia,	19		
Bilbao,	12		
Boston,	10	15 kgs.	
	120 bgs.	55 brls.	
Brass.	23 pks.		
Galatz,	100		
Guayaquil,	4 cs.		
Ibrail		100	
Medellin.		20 kgs.	
New York,	1 ck.	3 bxs. 354 brls.	
Para,	5	30 kgs.	
Philadelphia,	1		
Rotterdam,	103 bgs.		
Trieste,	100		

Paraffin Wax—

Bari,	30 bgs.	
Havre,	4 cs.	
Lisbon,	500	
Palermo,	5	

Phosphorus —

Hiogo,	6 t.	15 c.		£1,202
Hong Kong,		1		14

Potash Salts—

Honolulu,	18 t.	£175

Potassium Bichromate—

Salonica,	2 t.	3 c.	1 q.	£753
Yokohama,	5	1		177

Potassium Carbonate—

Baltimore,	4 t. 8 c.	£90

Potassium Chlorate—

Amsterdam,		6 c.	£9
Copenhagen,	2 t.		60
Gutujewski,	31		886
Kalmar,	1		30
Hamburg,	6	4	188
Hiogo,	17	10	530
Libau,	2	10	52
Naples,	1		31
Oporto,	1	1	27
Rotterdam,		19	30
Shanghai,	2	10	75
Sydney,	5	10	164

Salt—

Antwerp,	75 t.		
Bahia,		8 c.	
Baltimore,	95		
Brisbane,	127		
B. Ayres,	50		
Calcutta,	7,903	100 cs.	
Cameroons,	202	8 c.	
C. C. Castle,	10		
Cape Lahou,	15		
Cape Town,	25		
Cedar Rapids,	100		
Delagoa Bay,	5		
E. London,	114		
Hamburg,	489	100 cs.	
Iceland,	98		
Kingston,	145		
Lagos,	100		
Lisbon,	40		
Matadi,	35		
Melbourne,	16		
Montreal,	1,124		
Newcastle,	100		
N. Orleans,		31	
Noki,		900 sks.	
Para,	5,604 bgs.	5,000	
Pt. Elizabeth,	99		
Punta Arenas,		50	
Rio Del Rey,	50		
Rio Grande do Sul,	100		
Rotterdam,	150 t.		
St. John's, N.B.,		3,550	
Stockholm,	580 bgs.		
Sydney,	2,015	720	
	100 t.		
Valparaiso,		200	
Yokohama,	50		
Winnebah,		80	

Salt Cake—

Delagoa Bay,	4 t.	19 c.		£12
Lisbon,	40			64
Norrkoping,	101	14		135
Terneuzen,	200			238

Saltpetre—

Bombay,		10 c.	3 q.	£11
Ceara,		9	3	10
Maranham,	2 t.	9	1	51
Para,		11	2	12

Sheep Dip—

B. Ayres,	22 t.	6 c.	2 q.	£753
Cape Town,	600 dms.			84
E. London,	100			21

Soap—

Algoa Bay,	1,750 bxs.	
		127 cs.
Amsterdam,		260
Antwerp,		6 brls.
Bahia,		2 cs.
Basle,	270	
Bata,	10	
Batanga,	20	
Bermuda,	100	
Bluefields,	277	
Boca del Rama,	450	
Boma,	24	
Bombay,		19
Brisbane,		6
Brussels,	3,825	
Cabenda,	40	
Calcutta,	528	41
Callao,		6
Cameroons,		70
Cape Town,	501	
Cette,	40	
Constantinople,		3 brls.
Curacao,	200	
Delagoa Bay,	283	
E. London,		35 cs.
Eloby,	50	
Fernando Po,	48	
Gibraltar,	100	
Grenada	200	
Guayaquil,	450	
Halifax,		300
Hong Kong,	160	
Johannesburg,	22	
Kingston,		20
Las Palmas,	420	
Malta,		12
Matadi,	410	
Mauritius,	500	
Mexico City,	4	
Montserrat,	50	
Mpingwe,	40	
New York,		22 4 cks.
N'Kimbo,	20	
Penang,	87	
Piræus,		12
Pt. Elizabeth,	500	
Pt. Natal,	6,100	275
Rangoon,		12
Rawal Pindi,		12
Rio de Janeiro,		3
Rio Del Rey,	112	
Salonica,	60	
Salt Pond,	250	
Samarang,	2	
Savanna la Mar,	50	
Shanghai,	2,451	
Singapore,	500	
Sydney,		8,000
Toronto,		500
Trinidad,	150	
Valparaiso,	1,000	1 10 bdls.
Wellington,	1 tnk.	

Soap Leye—

New York,	145 dms.
Rotterdam,	100

Soda—

Constantinople,		30 brls.
Demerara,		5
Gibraltar,		30
Montreal,	595 kgs.	63 cs.

Soda Ash—

Bombay,	6 cks.
Boston,	89
B. Ayres,	126
Callao,	20
Canea,	40 brls.
Copenhagen,	800 bgs.
Gothenburg,	130
Johannesburg,	20 kgs.
Konigsberg,	200 bgs.
Leghorn,	120 100 pks.
Libau,	50
Madras,	4 cks.
Malta,	11
Maranham,	38
Melbourne,	323
Montreal,	12 tcs.
New York,	62 74
Oporto,	13
Philadelphia,	129
Shanghai,	8
Stettin,	400
Toronto,	80
Trieste,	100
Venice,	50
Vera Cruz,	13
Zante,	25

Soda Crystals—

Bombay,	100 kgs.	
Talcahuano,	30 bgs.	
	20 kgs.	
Valparaiso,	10	50 brls.

Sodium Bicarbonate—

Alexandria,	180 kgs.	
Amsterdam,	80	
Barcelona,	175	6 cks.
Beyrout,	10	
B. Columbia,	100	
Bluefields,	20	
Bombay,	245	
Bordeaux,	14	
B. Ayres,		20
Canea,	20	
Copenhagen,		4
Dunkirk,	10 brls.	
Genoa,	10	17
Gutujewski,	1,500	
Hiogo,	900	
Konigsberg,	40	
London,	40	
Madras,	80	
Melbourne,	20	
M. Video,	45	
Naples,		287
Odessa,	460	
Oporto,	20	
Patras,	30 bgs.	
Pt. Natal,	24 kgs.	
Rangoon,		4
St. John's, N'fld.,	60	
Seville,	47	6
Sydney,	100	
Toronto,	100	
Yokohama,	500	

Sodium Carbonate—

Boston,	56 brls.
New York,	56

Sodium Chlorate—

Chicago,	99 bxs.
Copenhagen,	30 kgs.
Gutujewski,	20
Hamburg,	2 13 pks.

Sodium Hyposulphite—

Naples,	5 cks.

Sodium Silicate—

Calcutta,	30 cks.

Sodium Sulphate—

Constantinople,	1 t.	7 c.

Sulphur—

Boston,	150 t.	£6
Ghent,	6	
Montreal,	25	1 c.

Sulphuric Acid—

Maranham,	1 t.	2 c.	2 q.
Pernambuco,	1		

Superphosphates—

Barcelona,	25 t.	2 c.
Las Palmas	10	
Nantes,	115	5

Yarnish—

Bahia,	2 cs.		
Bilbao,	5 cks.	3 pks.	
Calcutta,		59 dms.	
Cape Town,	2		
Manaos,		15	
New York,	4		
Seville,	3		
Shanghai,	1		

Zinc Chloride—

Genoa,	1 t.	9 c.	1 q.
Maranham,	11	1	

Zinc Sulphate—

Naples,	1 t.

MANCHESTER.

Week ending July 13th.

Ammonium Carbonate—
Copenhagen, 3 cks.
Ammonium Sulphate—
France, 866 bgs.
Aniline Colours—
Belgium, 1 cs.
Treport, 1
Aniline Oil—
Germany, 13 dms.
Russia, 22
Aniline Salts—
Germany, 10 pns.
Anthracene—
Germany, 65 cks.
Benzol—
Christiania, 3 cks.
Beta Naphthol—
Belgium, 2 brls.
Bleaching Powder—
Beyrout, 1 brl.
Carbolic Acid—
France, 117 btls.
Cement—
Italy, 5 cs.
Chemicals (*otherwise undescribed*)
Jaffa, 5 cks.
Rotterdam, 6 1 cs.
Colours—
Belgium, 15 cks.
Germany, 3
Extracts—
France, 8 cks.
Holland, 2 kgs.
Linseed Oil—
Beyrout, 13 brls.
Tripoli, 2
Pitch—
Belgium, 5,019 t.
Soap—
Malta, 4 cs.
Sodium Naphthionate—
Copenhagen, 103 bgs.
Tar Oil—
Treport, 1 ck.
Zinc Chloride—
Holland, 2 ck.

HULL.

Week ending July 9th.

Alkali—
Abo, 82 dms.
Hango, 130
Ammonium Sulphate—
Dunkirk, 200 bgs.
Rouen, 205
Bleaching Powder—
Abo, 20 cks.
Boston, 99
Hango, 26
Chemicals (*otherwise undescribed*)
Amsterdam, 116 cks. 12 btls.
Antwerp, 1 36 cs.
Bergen, 337 slbs.
Bombay, 574
Christiania, 1 4 104 pks.
Copenhagen, 41 10
Drontheim, 5
Gothenburg, 10 7
Hamburg, 166 1
New York, 10
Norrkoping, 10
Rouen, 10
Rotterdam, 5 35
Stettin, 9
Cottonseed Oil—
Amsterdam, 101 c.
Antwerp, 737
Bremen, 239
Christiania, 124
Dunkirk, 202
Gothenburg, 102
Hamburg, 482
Rotterdam, 626
Rouen, 228
Dyestuffs (*otherwise undescribed*)
Christiania, 2 cks.
Gothenburg, 1 cs.
New York, 25
Riga, 3
Glue—
Ghent, 20 bgs.
New York, 20
Linseed Oil—
Bergen, 16 c.
Bombay, 232
Christiania, 212
Copenhagen, 76
Drontheim, 122
Kurrachee, 22
Rotterdam, 4
Paint—
Antwerp, 13 cks.
Bombay, 296
Painters' Colours—
Antwerp, 191 cks. 4 cs. 114 dms.
Bergen, 61
Bombay, 296 99
Christiania, 1 3 32 pks.
Copenhagen, 40 7 30
Drontheim, 5
Gothenburg, 120 dms.
Ghent, 1 8
Hamburg, 12 6
New York 20
Rotterdam, 4 2 80
Stettin, 2
St. Petersburg, 1
Stockholm, 1 1 190
Sulina, 30
Pitch—
Antwerp, 415 t.
Slag Meal—
Gothenburg, 125 t.
Riga, 165
Wasa, 1,016 bgs.
Soap—
Amsterdam, 17 cs.
Bergen, 1
Stavanger, 3
St. Petersburg, 1
Tallow—
Stockholm, 17 cks.
Tar—
Abo, 10 brls.
Amsterdam, 12
Antwerp, 56
Copenhagen, 10
Hamburg, 40
Rotterdam, 14 cks.
Wasa, 30
Turpentine—
St. Petersburg, 30 cks.
Varnish—
Antwerp, 14 cks. 5 cs.
Bremen, 1 dm.
Stettin, 20
Wasa, 15 brls.
Waste Salt—
Amsterdam, 20 brls.

GLASGOW.

Week ending July 14th.

Alumina Sulphate—
Dunedin, 5 t. 18 c.
Ammonium Sulphate—
Amsterdam, 51 t. 9 c.
Rotterdam, 202 12
Bleaching Powder—
Calcutta, 4 t. 17 c.
Dunedin, 6 4
Borax—
Rotterdam, £141
Caustic Soda—
Dunedin, 15 t.
Chemicals (*otherwise undescribed*)
Dunedin, £40
Coal Products
Alizarine Oil
Lisbon, £31
Benzine
St. Nazaire, £65
Naphtha
Dunedin, £21
Pitch
Canada, £104
Danzig, 154 t.
Italy, 250
Tar
Canada, £48
Danzig, 212 t. 9 c.
Riga, 245
St. Petersburg, 400
Tar Oil
France, £140
Colours—
U.S.A., £71
Extracts—
Canada, £59 18 s.
Lisbon, £23
N. Zealand, 128
Linseed Oil—
B. C. Africa, 1 t. 7½ c.
Canada, 5 2
Dunedin, 7 1
Invercargill, 5
Wellington, 12
Logwood—
Canada, £38 10s.
Pt. Lyttelton, 33 15
Magnesium Sulphate—
Montreal, £38
Ochre—
Calcutta, £25
Paint—
Dunedin, £154 10s.
Painters' Colours—
Auckland, £141 15s.
Bombay, 306
B. C. Africa, 120 12
Canterbury, £100
Cape Town, 28
Chinde, 83
Invercargill, 76
Wellington, £283 12s.
Paraffin Wax—
Cape Town, £27
France, 101
Italy, 307
Rotterdam, 50
Potassium Bichromate—
Antwerp, £59
Dunedin, 58
Rosin—
Calcutta, 8 t. 15 c.
Salt—
Bombay, 1 t. 7 c.
Sheep Dip—
Napier, £200
Soap—
B. C. Africa, 12 t. 15 c.
Durban, 16 17
Pt. Elizabeth, 18 15
Sodium Arseniate—
Lisbon, 1 t. 10½ c.
Sodium Bichromate—
Italy, 1 t. 1 c.
Starch—
Rotterdam, £90
Superphosphates—
Dunedin, 150 t.
Tallow—
Rotterdam, 17 t.
Turpentine—
Danzig, £15
White Lead—
Canterbury, £100
Delagoa Bay, £62 10s.
Pt. Elizabeth, £50
Transvaal, 26

TYNE.

Week ending July 9th

Alkali—
Rotterdam, 8 t. 4 c.
St. Petersburg, 35 17
Antimony—
Antwerp, 2 t.
Copenhagen, 6 c.
Ergasteria, 3 q.
Hamburg, 2
New York, 45
Rotterdam, 2
St. Petersburg, 5
Asbestos—
Ergasteria, 1 c.
Barytes—
Hamburg, 150 t.
Bleaching Powder—
Aarhuus, 3 t. 10 c.
Antwerp, 12 5
Bergen, 8 14
Christiansand, 11 16
Copenhagen, 13
Gothenburg, 48 13
Hamburg, 11 5
New York, 12 12
Rotterdam, 10 16
St. Petersburg, 55 9
Trondhjem, 17 15
Bones—
Hamburg, 16 t. 17 c.
Borax—
Aarhuus, 1 t. 2 c.
Ergasteria, 3
Carbolic Acid—
Rotterdam, 5 t. 10 c.
Caustic Soda—
Copenhagen, 4 t. 7 c.
Gothenburg, 7 16
New York, 125 11
Rotterdam, 1 3
Stockholm, 1 11
Trondhjem, 3
China Clay—
Stockholm, 3 t. 1 c.
Flour Spar—
New York, 30 t.
Hydrochloric Acid—
Ergasteria, 1 t. 5 c.
Litharge—
Gothenburg, 1 t. 7 c.
Hamburg, 12 5
St. Petersburg, 4
Stockholm, 1
Magnesia—
Antwerp, 17 c.
Paint—
Antwerp, 5 t. 14 c.
Cagliari. 1
Coronel, 12
Hamburg, 3 15
Painters' Colours—
Bergen, 1 c.
Hamburg, 5
Rosin—
Coronel, 18 c.
Saltpetre—
Aarhuus, 5 t.
Soda—
Aarhuus, 3 t.
Rotte dam, 15
Soda Ash—
Bergen, 7 t. 1 c.
Gothenburg, 60 7
Soda Crystals—
Gothenburg, 8 t. 18 c.
Soda Salts—
New York, 17 t. 11 c.
Sodium Hyposulphite—
Antwerp, 3 t. 6 c.
Sodium Sulphate—
Stockholm, 3 t.
Sulphur—
Gothenburg, 100 t.
Tar—
Hamburg, 9 c.
Varnish—
Porto Grande, 1 q.

GOOLE.

Week ending July 6th.

Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck.
Hamburg, 8
Rotterdam, 13 dms.
Coal Products (*otherwise undes.*)
Amsterdam, 24 cks.
Boulogne, 4 1 cs. 5 pks
Rotterdam, 56
Colours—
Boulogne, 1 ck. 5 cs.
Creosote—
Kuysna, 1,350 cks.
Dyestuffs (*otherwise undescribed*)
Antwerp, 1 pk.
Dunkirk, 233 bgs.
Manure—
Dunkirk, 100 bgs.
Ghent, 104
Rotterdam, 200
Pitch—
Antwerp, 851 t.
Soap—
Antwerp, 1 ck. 5 cs.

GRIMSBY.

Week ending July 9th.

Chemicals (*otherwise undescribed*)
Antwerp, { 45 cks. / 30 t.
Dieppe, 1 ck. 3 cs.
Hamburg, 4 kgs.
Coal Products (*otherwise undes.*)—
Dieppe, 52 cks.
Hamburg, 2 2 cs.
Sydney, 1
Colours—
Antwerp, 7 cks.
Rotterdam, 5 38 pks.
Sydney, { 5 1 cs. 8 dms. / 176 tins
Soap—
Sydney, 21 cs.

PRICES CURRENT.

WEDNESDAY, JULY 20TH, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. .. per cwt.	6/-	&	8/6
,, Glacial .. .. ,,		37	6
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3¼
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	15	10	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	0	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B .. .. ,,	0	0	2¼
,, =24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	25	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	9	7	6
,, ,, (grey) Hull .. .. ,,	9	5	0
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	5
Antimony .. .. per ton	37	10	0
,, (tartar emetic) .. .. per lb.	0	0	6¼
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	5
Benzol, 90's .. .. per gallon	0	0	10
,, 50/90 ,, ... ,,	0	0	10
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. .. per lb.	0	0	7
,, (liquid 95/97% .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2½
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	3
Copper .. .. per ton	49	10	0
,, Sulphate .. .. ,,	16	10	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	17	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	10	0	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	5	0
,, Borate .. .. per cwt.	2	5	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	4	0
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	5	0
Stearine .. .. per ton	24	10	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. ..nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98% .. .. ,,	0	1	3
,, Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
,, ,, (Caustic Potash) 75/80 % .. ,,	19	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	0	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton (f.o.r. works)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	12	6
,, Arseniate, 45 % .. .. ,,	12	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	3
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton (10 ton lots)	8	5	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25%.. .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	10	0
,, Phosphate .. .. ,,	9	10	0
,, Prussiate .. .. per lb.	0	0	5¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5½
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6¾
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	13	9
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	22	0	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	74	0	0
Zinc (Spelter) .. .. ,,	20	7	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

CHEMICAL TRADE JOURNAL

AND

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LATE ADVERTISEMENTS.

WOOD DISTILLATION.—A Manager of twenty years' experience requires Engagement. Acetate of Lime, Soda, and Acesic Acid; Wood Spirit, Charcoal, etc. Can make plans and erect plant, being a Chemical Engineer.—Address, "X.Z.," *Chemical Trade Journal* Office, Manchester.

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Communications for the Editor, if intended for insertion in the current week's issue, should reach the office not later than **Tuesday morning.**

Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

PHOSPHORUS POISONING.

IT is a fortunate thing for some that the discussion of the dangers of match making should have come to the front just now, as we are in the "silly season," when dailies are glad of anything to fill their columns, and the faddist can enjoy the privilege of half a column to himself.

It is also fortunate in another way, in that, since sensational industrial reformers can obtain full expression of their ideas and beliefs, we shall possibly arrive at a point where their heated imaginations will fail them, and cool, uninteresting facts will receive a little consideration.

We are inclined to encourage all those who want to express opinions, to do so until they have nothing left to say. The more meetings, speeches, and deputations, the better, as they will only lead those who have to decide what shall be done, to the conviction that the more they hear, the less the dangers seem to grow.

Apparently, necrosis of the jaw is a disease hitherto unknown to many of those who just now are most ardently urging the Government to suppress the use of ordinary phosphorus in match making. Naturally, "phossy-jaw" has a peculiar charm for them, and they have yet to learn that the disease is one that has long been known, and that the match makers have formulated endless rules and regulations in their endeavours to suppress it. How far they have succeeded can be acertained from the Factory Inspectors' statistics.

We are strongly in favour of the prompt and severe punishment of all infractions of the Factory Act, but when it comes to the evils of making strike-anywhere matches, it is no use trying to remedy them by imposing a burden on an important home industry. Why do not all these well-meaning people go the root of the matter, and try and persuade Parliament to forbid the manufacture and the *importation* of all these matches that are so fatal to the makers? Of course they would have to face the outcry of the selfish, ease-loving public, but surely in the face of all the "terrors" of match-making which they are just now voicing so loudly, they would have no difficulty in satisfying the public and persuading them to be content with "safeties."

Nine-tenths of the matches used are not safeties, and as soon as the public can be induced to reverse the order of things, cases of necrosis will be unknown.

As things are at present, even the percentage of cases could be reduced by half or more, if the employees would give reasonable care to their teeth. But it is not an easy thing to *compel* 500 workpeople to clean their teeth, once a day, and every day.

We put it to the gentle nobles who have been so zealous of late about "phossy jaw" whether they have not been addicted to "fussy jaw," when they reflect that in order to save, say, 100,000 people submitting to regular inspection, and the trouble of exercising little more than ordinary cleanliness,

they seek to inconvenience millions by advocating the prohibition of yellow phosphorus in match-making?

THE ELECTRO-CHEMICAL COMPANY.

The times are so prolific in electrolytic enterprise that we are not astonished to hear of a debenture issue on the part of this Company for the purpose of extending its operations.

The invitation to the public to subscribe is backed up by a report from Professor Laurie, which contains much that is new and strange, and will provide the initiated with considerable food for reflection. We do not allude to the fact that the Report emanates from St. Mary's Medical School, London, which is perhaps in itself suggestive of debility or decay, but rather to the buoyant, nay even jubilant, tone which everywhere pervades it. Not only, we are told, is the process the best in the field, but all the difficulties have been overcome, and with the projected increase of plant the Company will, metaphorically speaking, find itself in clover. Further on we find this increase defined as the addition of a fourth to three existing installations, and for its justification we are told that prices are generally expected to move upwards again.

We are very pleased to find that the Electro-Chemical Company is so happy and prosperous, but we trust that it will be merciful in its strength, and not flood the market with the products which it can manufacture under such exceptional advantages.

THE ALUMINIUM INDUSTRY.

At the meeting of the Institute of Mechanical Engineers at Derby this week, a paper was read by Mr. E. Ristori, of London, on Aluminium Manufacture. It stated that at the meeting of the institution at Belfast in July, 1896, Mr. James Sutherland, the manager of the factory at Larne, read a paper which fully described the method adopted for the preparation of pure alumina (oxide of aluminium) from bauxite. Members who then visited the factory would be interested to learn that the British Aluminium Company had already been compelled to enlarge the works to nearly double the capacity, and that great improvements had since been introduced into the process of manufacture. The finished product was a very finely divided powder, and in order to ship it safely to Foyers, it had been found advisable to pack the alumina in hermetically-sealed steel drums. On arrival in Scotland, the oxide was reduced by the Heroult process, and the metal was run out of the electrolytic baths into ingot moulds. In this form the aluminium was quite pure enough for certain purposes, such as foundry work and steel-making, and much of it was therefore sold without further treatment. But as small quantities of the cryolite—a double fluoride of aluminium and sodium containing 13 per cent. of aluminium—which was used as a solvent during the electrolysis, occasionally became mixed with the metal as it came out of the furnace, the aluminium at this stage was scarcely suitable for the production of tubes, rods, &c. The original crude ingots were therefore sent to Milton, in Staffordshire, where they were remelted and refined until the metal attained a purity of 99·6 per cent. Of the rolling mills and foundry where these operations are carried on a detailed description was given, and it was incidentally claimed that, with certain limitations imposed by the chemical and physical peculiarities of the material, aluminium could be worked much like the other industrial metals in use at the present day. As to

THE USES OF ALUMINIUM

it was remarked that the properties of the metal were so akin to those of copper and brass that, broadly speaking, aluminium or one of its light alloys should to a large extent replace both copper and tin, and also nickel or German silver. Such a change would be followed by various advantages to all concerned. Not only would there be a considerable reduction in the weight of the articles, but they would not tarnish or turn black on exposure to air. The cost should be the same, if not actually lower, inasmuch as, bulk for bulk, aluminium was already cheaper than copper or tin, and its price would continue to fall as the demand increased. One field, however, remained which copper was bound to maintain as its own – namely, the construction of insulated electrical conductors, for which copper was absolutely unapproachable, on account of its greater conductivity volume for volume. A steady demand for aluminium was springing up in various kinds of printing processes, as well as in lithography. The metal appeared to answer admirably for the construction of rollers used in calico printing, and when its surface was properly prepared it was also capable of replacing *the ordinary* lithographic stone. It could easily be imagined that, instead of having cumbrous and heavy stones, which could be printed only on special slow-running "litho" machines, it was far better and cheaper to use thin sheets of a metal which could be bent into a circular form and printed on rotary presses. Bicycles of all kinds, electric-light fittings, chains, bridles, stirrups, surgical instruments, sextants, and other scientific apparatus, keys, cigar-cases, pen and pencil holders, toilet articles, plates and dishes, spoons, forks, frames, name plates, door furniture, hat and coat pegs, boot-trees, fire-engine fittings, business and visiting cards, photographic cameras, etc., were a few of the things that were being daily made in aluminium by various firms, and all these articles should be sold at the same price as if they were composed of brass.

ONE OF THE LARGEST

uses to which aluminium had been applied was metallurgy. In almost all steel work, and in all the principal foundries, aluminium was now being applied. In these cases aluminium did not actually replace any other metal, but by its own special qualities was useful as a means of improving physically and chemically some of its older rivals and friends. The use of aluminion in shipbuilding was growing rapidly, on account of the almost inestimable advantage of its great saving in weight. Certain vessels had been constructed entirely of aluminium, but they did not seem to have been a real and permanent success, owing, probably, to the adoption of an unsuitable metal. As pure aluminium was not strong enough alone, it was thought better to use an alloy containing about 6 per cent of copper in the construction of some of these boats. This alloy possessed a tensile strength of 14 tons per square inch; but this material was absolutely untrustworthy in sea water, owing to the rapid corrosive action set up between its two ingredients. Moreover, although nobody would dream of employing any other metal than copper for plating sea-going vessels unless it were afterwards painted, aluminium had always been used bare, which the author considered a mistake. If the aluminium had been protected from direct contact with the water it would have lasted much better. Unfortunately, this comparative failure had materially discouraged the adoption of aluminium in shipbuilding, and although it was now well recognised that the pure metal, and several of its alloys which did not contain copper, stood the action of salt water better than iron or steel, some time was likely to elapse before these premature tests were forgotten. When further experiments had been carried out there was no reason why an alloy should not be adopted which, when properly used and protected from direct contact with sea water, would resist corrosion as effectually as the majority of materials now employed in shipbuilding. These remarks referred only to the keel and other parts of the vessel below water, and chiefly to such craft as were to navigate the open seas. For all internal work aluminium was perfectly safe, and it was specially suitable for adoption in the navy, where the presence of wood and other inflammable material should be discouraged as much as possible, lest it should lead to fires during action. In all boats sailing on fresh or inland waters the corrosion was less, and when portability was desired, as in the case of expeditions to little-known parts of the world, even if the aluminium did suffer corrosion, this was of trifling moment in comparison with the advantage of the smaller weight to be transported.—In the discussion that followed Sir W. H. White said he had had very little experience of aluminium in the Royal Navy, but he had closely watched its use in private yards and elsewhere, and he entirely agreed with Mr. Mills that they must regard it as a new metal, their experience of which was very limited. When it was first introduced they were told that it would not corrode in sea water—that their troubles from fouling would disappear in future. But that was quite contrary to their actual experience. The vessels in the construction of which aluminium was employed soon reached the stage which had been described as a galloping corrosion. Nor were the coatings used for the protection of other materials equally useful when applied to aluminium. He had no doubt that ultimately a suitable alloy would be found, but at present the alloys were quite useless for the purpose of resisting the shock, and it would be useless for him to undertake the responsibility of using aluminium for the outside skin of a vessel. He could not doubt in the least, however, that all these difficulties would be surmounted, and that the metal would be of great use for suitable purposes. What those purposes were experience alone could decide. He looked forward to the time when such a material, so strong and so light, would be largely available for many structural purposes, including ship construction and marine engineering.

Obituary.—With very great regret we have to announce the death of Mr. John Knowles, whose connection with the firm of Bowman, Thompson, and Co., Ltd., dates from the formation of that company. As a man of business it is difficult to over-estimate the loss which the firm sustains by his death, and his unassuming, capable, and generous individuality will live long in the remembrance of a host of friends. Mr. Knowles's death, which took place on Wednesday last, was preceded by a long and painful illness, due to blood poisoning set by a diseased bone in the face.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

White Lead by Electrolysis. E. Bailey and W. T. Hey. 15,155. July 11.
Producing Magnetic Oxide to Prevent Rust. A. S. Bower. 15,191. July 11.
Obtaining Cyanogen Compounds. J. Mactear. 15,207. July 11.
Protective Coverings for Calcium Carbide. G. Dillberg. 15,213. July 11.
Extracting Tin. S. O. Cowper Coles. 15,236. July 12.
Smoke Consuming Appliances. E. Taylor. 15,243. July 12.
Manufacture of Concentrated Hydrochloric Acid. D. Williams. 15,289. July 12.
Smoke Consuming Appliance. A. Whowell and A. A. Whiteley. 15,381. July 13.
Improved Electrolytic Diaphragm. W. P. Thompson. 15,430. July 13.
Carbnoising Wools. J. E. G. Méran. 15,491. July 14.
Improvements in Filterpresses. C. Prandtl. 15,494. July 14.
Separating Solids from Sewage, etc. J. Thomas and S. Charlesworth. 15,508. July 15.
Purifying Brine, etc. C. C. Moore. 15,557. July 15.
Extracting Caoutchouc. O. Zürcher. 15,569. July 15.
Distributing Sewage, etc., on Filter Beds. G. E. Rigeway. 15,616. July 16.
Paint Remover. F. Johnson. 15,697. July 16.
Treating Refractory Sulphide Ores. F. Ellershausen. 15,645. July 16.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Apparatus for Purifying Gases by Washing or Scrubbing. H. H. Lake, 45 Southampton Buildings, London, W.C. (communicated by Fellner and Ziegler, Bockenheim, near Frankfort, Germany). Eng. pat. 17,644. July 27, 1897.

The scrubber is of the horizontal type. A series of division plates depend from the roof of the chamber and gradually increase in depth as they approach the gas entrance. The longest only reaches about half-way down the chamber. Between these are subsidiary partitions supporting horizontal perforated plates on a level with the lower extremity of each primary division plate. On admitting the gas the liquid in the washer rises to various levels in the different compartments, forming a series of step-like layers of liquid, through which the gases bubble. Any excess liquid that may accumulate in the chamber is removed by a sealed dip-pipe near the gas outlet. The same arrangement admits air if by any chance there is a vacuum formed in the scrubber, thus preventing any of the scrubbing liquid being sucked back through the gas supply pipe. Any dust or solid particles in the gases are arrested, and collect at the bottom of the scrubber. There are two figures.

An Improved Composition for the Dephosphorisation of Metals, and Process and Ingredients for Producing the same. A. Böttger, Dusseldorf, Germany. Eng. pat. 14,909. June 19, 1897.

The dephosphating mixture is prepared by agitating 80 parts of lime and 45 of sodium carbonate with cold water. Ten parts of minium are dissolved as far as possible in hot water, and then added to the lime and soda mixture. Flour is added to give the whole consistency, so that the mass can be pressed into cakes. After leaving the mould each cake is dipped into petroleum, and is then ready for use. The mass is introduced into the furnace by a hopper and horizontal spiral conveyor arrangement, to illustrate which there are five figures. Four such devices are situated in tuyere fashion at the base of the cupola, etc.

Improvements in the Manufacture and Use of Paint. C. E. Lee, of New York; C. F., A. L., and A. W. Lawton, all of Water-street, New York. Eng. pat. 24,178. Oct. 19, 1897.

A water-mixed silicate paint is obtained by the application of two coats. The first coat consists of a mixture containing lead carbonate, calcium carbonate, zinc hydroxide, and a neutral water solution of silica, obtained by Graham's diffusion method. A number of salts may be used instead of lead carbonate, or zinc hydrate, including oxide, hydrate, chloride or oxy-chloride, or oxalate of lead, and a hydrate or hydrated silicate of zinc, calcium, barium strontium, magnesium, or copper. Any desired colour can be obtained with suitable pigments. This mixture may be prepared in varying proportions, examples of which are given in the specification, and is ground well and mixed with water to the *consistency of cream*. When the first coat is dry, a second coat of zinc-ammonia-soda silicate is applied. The latter is prepared by adding a solution of zinc hydroxide in liquid ammonia to sodium silicate. When first added a white bulky clot is formed, but by vigorous stirring a clear solution of the compound silicate is obtained. The chemical reactions supposed to take place are set forth in the specification. When a thick coat is desired the compound silicate is applied first, followed by the water-mixed paint. When the latter is dry, a final coat of compound silicate is applied. The chief claim is for the use of a *neutral* silicate solution to bind the paint mixture.

Improvements in or Connected with the Obtaining of Gutta-percha. R. J. Friswell and Messrs. Brooke, Simpson, and Spiller, Ltd, Atlas Works, Hackney Wick, London. Eng. pat. 19,727. Aug. 26, 1897.

The raw material is dried and crushed between rollers, but this preliminary treatment is not essential. The raw product is heated and agitated in a closed vessel with caustic soda solution until only gutta-percha and cellulose remain undissolved. The mass is then removed from the caustic ley, and dried. The gutta-percha is extracted from the dried mass with successive quantities of toluene, assisted by heating and agitating. These extracts, or such as may be deemed rich enough in gutta-percha are mixed together and concentrated, the solvent being recovered. When the solution is strong enough, it is cooled and the gutta-percha, precipitated by the addition of 90% alcohol. The resulting gutta-percha is freed from toluene and alcohol by washing with water or air, and finished by macerating in hot water in the usual way. The quantity of alcohol required is from one and a half to twice the volume of the gutta-percha solution.

Improvements in or Connected with the Obtaining of Gutta percha. R. J. Friswell and Messrs. Brooke, Simpson, and Spiller, Ltd., Atlas Works, Hackney Wick, London. Eng. pat. 19,728. Aug 26, 1897.

The method of procedure is substantially the same as in the foregoing patent, only carbon bisulphide is used as a solvent *vice* toluene. In this case alcohol is not suitable as a precipitant, and acetone is used instead. As an alternative, the gutta-percha may be obtained by the direct volatilisation of the bisulphide.

ANSWERS TO CORRESPONDENTS.

A. & W., LTD.—It is not issued yet, and will probably not be ready for a few weeks.

E.W.—We are afraid we cannot help you over corundum very much. For statistical purposes it is mostly considered the same as emery. You might ask the few mineral importers there are if they can help you.

B. & Co.—We think you will find them. On the occasion you wrote there were none.

E.H.—We are obliged. Copies have been sent.

THE MANCHESTER SEWAGE QUESTION.—The fortnightly meeting of the Rivers Committee of the Manchester Corporation was held on Monday, Sir Bosdin T. Leech in the chair. It will be remembered that at the last Council meeting a report was presented by the Finance Committee calling attention to the unsatisfactory condition of the Rivers Committee's finances, and the Town Clerk attended on Monday for the purpose of suggesting a means of remedying this state of things. The difficulties of the situation arose out of the fact that while the Local Government Board insist upon land treatment as essential to sewage purification, the Rivers Committee appointed last November have submitted a report to the Council in which filtration by land is excluded. Under these circumstances the Local Government Board have refused sanction to borrowing powers being obtained by the Rivers Committee such as would enable them to meet their present and contingent liabilities. In order to remove this deadlock it was at first proposed by the Rivers Committee that advantage should be taken of the provisions of the Public Health Act, which empowers the Corporation to borrow money for sewage purposes on the security of its plant, &c., at Davyhulme, without the sanction of the Local Government Board. On being presented to the Council this resolution was amended so as to compel the committee to conform to the requirements of the Local Government Board so far as land treatment is concerned. As far back as 1893, certain lands were scheduled in the neighbourhood of Flixton for this purpose, but at the present time these powers have lapsed. At the meeting it was decided to resume these powers in the next Parliamentary Session with a view to obtaining the consent of the Local Government Board to borrowing powers. The present liabilities of the Rivers Committee amount to between £60,000. and £80,000, and without some course being taken such as was resolved upon, the whole amount would require to be found out of the city rates. It is probable that powers for borrowing from £100,000. to £150,000. will be obtained.

Reports of Companies.

FISH OIL AND GUANO COMPANY.

THE first (statutory) general meeting of the shareholders of the Fish Oil and Guano Company, Limited, was held on Saturday afternoon last, in the Leinster Lecture Hall, Molesworth-street, Dublin, Lord Lurgan (chairman of the company) presiding.

The Chairman said: In the first place, I wish to express the pleasure it gives me to see so many of you here present, and to find myself in the presence of so many whose faces are becoming familiar to me at these successive meetings of the Fish Oil and Guano Company. I think that, perhaps, I owe you an apology for having fixed this meeting for a Saturday. My reason for this was that I have some very important business on hand in London at present, and this was the only day I could manage to be in Dublin, and I was anxious to be present at this meeting and see you all here to-day. I must admit that I have been extremely annoyed to find that a rumour has been industriously circulated in Dublin to the effect that this meeting was fixed for Saturday afternoon because we were anxious that very few shareholders should be present, and because we had no good news to tell you. This is very poor reward for the policy that we, your directors, have always adopted, namely, of telling the shareholders everything we know and hiding nothing of any kind from them. Believe me, whether the news we have to give is good or bad you will always hear it, and that as soon as possible, straight from the directors. But, apparently, there are many people about who prefer to rely on second-hand information, idle rumours, and vague press reports, and if they like to believe such, and you like to believe such, it is out of the power of the directors to prevent it. You are aware that this meeting to-day—our statutory meeting—is practically the second of the Fish Oil Company, as, naturally, we had one when we were only a syndicate It is necessary to hold such a meeting according to Act of Parliament; but there is very seldom any real business done at these statutory meetings. However, they afford the directors a chance of meeting their shareholders and of taking them into their confidence in connection with the goings on and the business of their company. Personally, I am glad to have this opportunity of—according to my usual custom, as I think you will admit—giving you all the information in my power. The new company was registered on April 5th last, rather less than four months ago. The arrangements connected with the registration of the new company and the issue of the additional capital, and also the proceedings for the winding up of the old company, all took up a great deal of time and trouble. However, these matters have practically all been satisfactorily concluded, and the new company has been fairly launched. In addition to this, during these four months Volenite, Limited, has been brought ut, and the directors of that company, of whom I am one, are now engaged in supervising the erection of the necessary plant and machinery at Alperton. I think Volenite, Limited, has been lucky in securing these premises at Alperton, which is only about 8 or 9 miles out of London, and is a peculiarly well-adapted place for this business—a new railway within a few yards of the factory being in course of construction, and a canal also within a stone's throw. But the statutory meeting of Volenite will be held very shortly, when full particulars will be duly given, and I need not, therefore, go into details. I may state, however, that so far as I am aware, everything connected with Volenite is in a most satisfactory condition, and I have no reason to alter the opinion I expressed of its future success when last I had the pleasure of addressing you.

We are also negotiating a sale of the fish oil, &c., patents for Russia, and everything is in an advanced state for bringing out the company early in the autumn. We have in this case acted rather upon the lines of the American Company, namely, not relied solely on the Stanley patents, but combined with them valuable and going concerns. This, where it can be adopted, is, I am sure, the right line to work upon, and I may tell you that from the figures submitted to us, the net profits from one branch alone of the Russian business to be taken over appear to work out at over £20,000. a year. This will show you what we have been doing during the last four months since the formation of the company, and I think you will agree with me, taking all things into consideration, and the war which is still going on, that it is not a bad record. There are some people who keep on saying "What are you doing—why don't you bring about more sales?" I think if these energetic people were to change places with us for a time they might give us a little more credit for what we have done and are doing, and they would also exercise a little more patience with us than some of them at present seem inclined to do. You would, I think, be surprised if you really knew the number of companies that were intended to be brought out in London of late, but have had to be held back, owing to the war and the impossibility of getting underwriting done. However, I hope all this may have improved by the early autumn. My attention has been called to a reference in the *Irish Times* of Thursday 21st as to the depression in the shares of this company, and a *statement* that the shareholders are very anxious for some explanation on the subject. I myself have had numberless letters from shareholders, both from ladies and gentlemen, on the same subject, and asking me why I don't put the price of the shares up, and why I don't support the market, and making many other valuable suggestions. Now, I wish to speak very plainly on this subject. If you think that it is the duty of a director to regulate the market prices of the shares of his company, or to support the market when they are falling, believe me, I, for one, should certainly not feel disposed to act as a director for that or any other company. I have on past occasions done my best to persuade you not to listen to the rumours that are so freely circulated, nearly all of them for the purposes of driving the shares up or down. If, however, shareholders will persist in taking these rumours seriously there will then continue to be serious results. Without wishing to be personal, I think I may say the Dublin market is an extremely sensitive one, and if possible some of our shareholders are more sensitive still. They listen to these wild stories and rumours, and straightway rush to sell their shares, which naturally forces down the price; and I ask how can any directors avert this result? I can only once more repeat that I know nothing to cause any depression in connection with any of the companies in which we are interested. Nor do I know of anything to cause any anxiety either to us, your directors, or to our shareholders in connection with them. In conclusion, I hope I have expressed myself clearly as to our position, and that you will agree with me in thinking that the Fish Oil and Guano Company is, as it has always hitherto been, in a very flourishing condition, and I trust with many years of prosperity before it.

PACCHA AND JAZPAMPA NITRATE CO., LTD.

At an extraordinary general meeting held on Monday, at Winchester House, Mr. G. A. Lockett presiding, the resolution passed at the meeting on the 6th inst., for winding up the company voluntarily, was confirmed, on the motion of the chairman, seconded by Mr. John Yule. Mr. Andrew D. Chadwick was afterwards appointed liquidator. The chairman then stated that the question they had next to consider was whether the suggested reconstruction of the company met with their approval. In that case they would have to meet again to confirm the resolution, and their solicitor had drawn out an agreement, which that gentleman would read to them if they wished him to do so. He had left the matter open to every one concerned for two months to come in if he desired. If, however, the shares were not applied for, the liquidator had the right to rescind the agreement and go on with the liquidation. If the reconstruction went on, the liquidator would have the right to sell the shares at the best prices he could get for them. The solicitor then read the agreement. In a circular forwarded to the shareholders, the directors stated that they calculated that if the proposed scheme of reconstruction was adopted by the shareholders as a whole, and every shareholder would accept for each £5. share in the present company a share of £1., with 14s. paid up, in the reconstructed company, it would only be necessary for the present to call up on the shares of the reconstructed company the sum of 2s. per share to enable the company to wait for better times and an improvement in the nitrate market through the formation of a new combination or any other cause. At the same time, the directors added, it must be clearly pointed out that if only a portion of the shareholders were willing to co-operate in the reconstruction scheme a larger amount per share would have to be called up or the idea of reconstruction abandoned. The chairman then proposed a resolution expressing the desirability of reconstructing the company. Mr. Yule seconded the motion, which was carried. Further resolutions were afterwards passed authorising the liquidator to consent to the registration of a new company, to be named the New Paccha and Jazpampa Nitrate Company (Limited), and approving (with one dissentient) the draft agreement submitted to the meeting, and expressed to be made between the company of the first part, its liquidator of the second part, and the new company of the third part, and authorising the liquidator "pursuant to section 161 of the Companies Acts, 1862, to enter into an agreement with such new company when incorporated in the terms of the said draft and to carry the same into effect with such (if any) modifications as he thinks expedient."

AFRICAN GOLD RECOVERY CO., LTD.

An ordinary general meeting was held recently at Cannon-street Hotel. Mr. Charles McCulloch, who presided, said it would be in the recollection of the shareholders that the result of the litigation in which they were concerned in the Transvaal was adverse to the company. Not only was their patent held to be invalid by the Transvaal Courts, but they were mulcted in heavy law costs, as, according to the finding, they were liable for the expenses of their opponents. These amounted to a very large sum, and one of the objects to which the directors turned their attention was the reducing of the amount as much as possible. The negotiations in connection therewith occupied considerable time and proved to be of a very delicate nature; but the board succeeded in

ultimately arranging a settlement for £15,000, or about a quarter of the amount originally claimed. As to the losses made by the company on its investments, he need hardly say that these were a source of profound regret to the directors. The reaction in South African matters which followed the Jameson raid had been the principal cause of the heavy depreciation in their securities. They were still in possession of extensive properties in South Africa, and the policy recommended by the board in regard to them was one of gradual realisation, believing that eventually very much better prices would be obtained than by disposing of them in the present circumstances. It was a matter of common knowledge that the attitude of the Transvaal Government towards the mining industry had retarded progress, but an improvement might be looked for at no distant date. In order to preserve their West Australian properties without trenching on their other assets the board recommended the formation of a small company, to take over and hold them as from the 1st inst., with a capital of £12,500, divided into 50,000 shares of 5s. each which it was considered would be sufficient to demonstrate their value. In the first instance it was proposed to make a call of 6d. a share on application and 6d. on allotment, and later calls of 1s. 6d., which would provide the requisite funds for 12 months' working. In conclusion he moved the adoption of the report, which was seconded by Mr. Robert Smith, and agreed to.

DIVIDEND.

PRICE'S PATENT CANDLE CO., LTD.—The accounts for the six months ended June 30th last, show, subject to audit, a profit of about £33,700., and the directors recommend the declaration of a dividend of 15s. per share, which will absorb £28,125.

DYNAMITE MANUFACTURE IN THE TRANSVAAL.

REFERENCE has frequently been made in these columns to the development of the dynamite question in the Transvaal, in pursuance of which the following extracts from a translation of the report recently made to the Government of the South African Republic by their representative, Dr. Loevy, will be found interesting. Dr. Loevy says:—"In consequence of your letter of 4th January, 1898, I have paid several surprise visits to the South African Explosives Factory, with a view to inspect the plant and installations of their factories as closely as could be done in the comparatively limited time. As requested in yours of 18th January, 1898, I now beg to report upon my inspections, and to give you my opinion in respect of the output capacity of the factories. On the 6th of January, 1898, when I paid my first visit to the factories, they produced a striking and imposing effect, not only from their size, covering an area of 5,500 English acres, but also from the extreme order and cleanliness to be seen even in what are apparently the most trifling details. On my first visit I inspected dynamite factory No. 1, and commenced with the nitrating house. When entering same a charge was just in course of nitration, superintended by a chemist. Each charge takes from 40 to 75 minutes to complete—fluctuating according to the temperature—so that it is easy to make eight charges per day of nine working hours. This one nitrating house can therefore produce 496 metric tons of nitro-glycerine per day of nine working hours; equal to 148,800 metric tons of nitro-glycerine per annum (300 working days). I next visited the mixing and cartridging houses belonging to the dynamite factory No. 1, and I saw in each of them 15 to 25 white and black workpeople of both sexes who were occupied with the preparation of gelatines, the mixing of guhr-dynamite, geligнite, and with the cartridging and packing of explosives. The collodion cotton is not manufactured at the works itself, but is imported from Europe, containing from 30 to 35 per cent. of moisture. It is properly dried at the factory for making it suitable for the manufacture of gelatines. I afterwards saw the denitration plant. I made the water supply of the factories a subject of special investigation, and I found the following arrangements:—Two water dams, then more than half full. The total capacity of the dams was reported by the general works manager as being 360,000 cubic metres. Four condensing and cooling towers, by which the water that has become warm in the various manufacturing processes is cooled down again and made suitable for reuse by cold produced from evaporation. The great utility of this cooling plant is evident from the fact that part of the water drawn from the dams is regained for further use, so that the actual consumption of water from the dams is reduced to a minimum. On the 12th January and 16th February, 1898, I visited the factories the second and third time, and inspected the following departments:—The two sulphuric acid factories. Each of these contains a series of roasting furnaces in which a total of 10,000 kilos. sulphur can be burnt into sulphurous acid. The lead chambers, in which the sulphurous acid is oxidised into sulphuric acid, have a total capacity of 18 000 cubic metres The concentration plant in the sulphuric acid factories is of the highest degree of perfection. There are 4 platinum-gold sets of concentrators, consisting of 8 platinum concentrators plated with gold inside and 8 lead pans; 6 double sets of platinum and iron, consisting of twelve platinum concentrators, 12 iron concentrators, and 12 lead pans. The whole concentration plant therefore comprises 20 platinum boilers, weighing altogether, according to the company's books, 430 kilos, of which the platinum weighs 400 kilos and the gold 30 kilos, the value of which I estimate at £35,000. Taking that according to Lunge, 1 cb. m. of acid chamber is required to produce 2 kilos of monohydrate sulphuric acid, the two factories are capable of turning out 36 tons of strong sulphuric acid (98 per cent.), if a correspondingly large quantity of sulphur be burnt. I estimate the minimum production of the two factories on basis of the above figures as being 30 tons sulphuric acid (96-98 per cent.) per day. The nitric acid factory comprises 40 retorts, each of a capacity of 1,600 kilos, to receive the mixture of nitrate of soda and sulphuric acid. I estimate the output capacity of the plant on basis of the foregoing figures at 20 to 22 tons of strong nitric acid per diem. The nitrate of soda store has, according to the information given by the general works manager, a storage capacity of 6,000 tons. The stock of sulphur I estimate at 1,500 tons. The stock of glycerine amounts to about 660 tons. There are 11 houses for married employees, as well as sufficient dwelling accommodation for 500 whites and about 2,000 blacks. The entire staff at the factory consists of 11 chemists, 7 engineers, 23 clerks, about 450 white and 1,700 black workpeople. Before entering into calculations respecting the output capacity of the dynamite factories in connection with the question of whether the factories, as they now stand, are in a position to manufacture enough to cover the entire consump- of explosives in the South African Republic, I think it convenient to offer some remarks about the supply of raw materials, including, in the first place, nitrate of soda, sulphur, kieselguhr, and then glycerine and collodion cotton. In virtue of my eight years' experience as a chemist in the country, I consider it out of the question that nitrate beds, even of approximately sufficient thickness, can be found in this country to cover the requirements of the dynamite factories. The same applies to sulphur. I think it, however, possible that that sulphur may be extracted in sufficient quantity from the concentrates, which are a product of the gold mining industry, but the realisation of the scheme, requiring most expensive and lengthy preparations, is, in my opinion, still very remote. Kieselguhr, as I have latterly repeatedly had the opportunity of satisfying myself, is found in various districts of the country, and if the quality thereof is considered suitable, probably part of the requirements might be covered by home produce. I consider it utterly impossible ever to manufacture glycerine and collodion cotton in sufficient quantity from home produce. In my opinion the dynamite factories will probably be compelled for all future times to continue to import sulphur, nitrate of soda, kieselguhr, glycerine, and collodion cotton. From these materials they are able to manufacture sulphuric acid, nitro-glycerine, dynamite, blasting gelatine, and other kinds of nitro-glycerine compounds. As a basis for calculating the output capacity of the dynamite factories, I take the figures given by the Johannesburg Chamber of Mines in respect of the consumption of explosives in the South African Republic. According to these figures the consumption for 1896 was as follows:—Blasting gelatine, 180,000 cases, 4,500 tons; dynamite No. 1. 50,000 cases, 1,250 tons; other kinds, 20,000 cases, 500 tons. The average nitro-glycerine contents of the different kinds is as follows:—For blasting gelatine, 92 per cent.; for dynamite, 75 per cent.; for other kinds, 50 per cent. The following table shows the consumption for 1896 and relative contents of nitro-glycerine:—

Name of Explosive.	Number of cases.	Number of tons.	Percentage of Nitro-glycerine Contents.	Nitro-glycerine Contents in Tons.
Blasting gelatine..	180,000	4,500	92	4,140
Dynamite No 1..	50,000	1,250	75	937·5
Other kinds	20,000	500	50	250
Total ...	250,000	6,250	-	5,327·5

It follows from these figures that for the manufacture of the total consumption of explosives in the South African Republic in 1896 there were required 5 3,27·5 tons of nitroglycerine. According to the general works manager, Mr. Honig, these figures are too high. He indicates the consumption per 1897 at 210,000 cases at 50lb. net, with an average nitroglycerine contents of 28·8 per cent., which is equal to 4,756·5 metric tons, with a total contents of 3,938 metric tons, equal to 4,332 English tons of nitroglycerine." Dr. Loevy estimates the production of nitroglycerine from three nitrating houses per annum as 4,464 metric tons, equal to 4,910 English tons, and from four nitrating houses 5,952 metric tons, equal to 6,547 English tons, to supply a demand of, according to the chamber of Mines, 5,327·5 English tons, or, as per company's statements, 4,332 English tons. "It seems scarcely necessary to point out," he remarks, "that an increase in working hours, or the bringing into use of the fifth nitrating plant, would proportionately multiply the supply of both acids and of nitroglycerine. On the basis of these calculations, as well as in view of my repeated thorough inspection of the factories, I come to the following conclusions:—I do not entertain the slightest

doubt that the dynamite factory is in a position to manufacture the entire consumption of explosives in the South African Republic. I am also satisfied that all preparations and precautions have been taken to cover the prospective growth in the consumption. I am therefore quite clear as regards the technical aspects of the question, but am not so as regards its financial and commercial aspects. I am unable to give any information about the cost of manufacturing explosives at Modderfontein, and am therefore unable to give an opinion whether their manufacture at Modderfontein may be regarded as profitable and possible from a financial point of view. To give an opinion on this it would be necessary to inspect the factory books to ascertain the working cost, etc."

PHOSPHATE MINING IN TENNESSEE.

ACCORDING to Mr. J. B. Killebrew, the work of mining phosphates in Hickman County, Tenn., can be carried on very cheaply. Mining can be done in many places by contract at 50c. per ton. It requires 30c. per ton to haul the rock and pass it through the crusher, making the total cost per ton, less hauling to the railroads, 90c. On the outcrops at several of the mines the rock may be mined as low when day labour is employed. Open-face mining costs 60c per ton; where tunnel mining is carried on at the South-western mines it takes $1.40 per ton to mine, haul, and crush the rock. The drilling is done with a ratchet drill. Labour is paid 90c. per day. The mining in tunnels is more expensive, but with compressed air, as now provided at the mines of the Duck River Phosphate Company, it may easily be brought within the limit of $1.25 per ton, and when the mines have been well opened with convenient arrangements for hauling the rock it is believed the cost will be reduced to $1.15 per ton f. o. b.

A large deposit of phosphate rock occurs on both sides of Indian Creek, in Hickman County. The Centerville branch of the Nashville, Chattanooga and St. Louis Railway runs up Indian Creek, making the whole of this field at present accessible. Nothing is now required but some short spurs of a few hundred yards in length to bring this phosphate to the main line and to market

This deposit belongs also to what is called the Sub-Devonian phosphate beds, and lies in a strip of land parallel with the deposits on Swan Creek, six miles east. At the outcrops the phosphates at this place are somewhat variable in thickness, but will no doubt, after being thoroughly opened, be found to reach a greater uniformity in the thickness of the beds. Excavations have been made from points within a few hundred yards of Centerville, to Dean's Switch, a distance of two miles. These openings are on both sides of the railroad, and some 16,000 or 18,000 tons have been mined and shipped from this place.

Lying immediately on the railroad, 40 ft. above grade and very close to it, are large outcrops of the brown phosphate on Indian Creek, which character of phosphate was thought not to exist in this locality at all. At one place it is of extraordinary thickness, measuring from 8 to 10 ft. Usually, however, the thickness as at present developed is only from 3 to 4 ft. The brown rock on Indian Creek underlies the blue rock, and resembles in texture, composition and weight that found at Mount Pleasant, in Maury County, but it does not belong to the same geological formation. It appears to have resulted from the leaching or weathering of what is called the gray rock. It is a curious fact that the blue rock on Indian Creek occurs above the gray, while the gray is found above the blue in the deposits on Swan Creek.

On the east side of Indian Creek are three hollows, which run at right angles to the railroad. Two of these hollows are known by the name of Weiss, and for a half mile up these a considerable amount of phosphate has been mined. The Chattanooga or black Devonian shale is found in place in all these hollows. This black shale has embedded in it a large amount of kidney ore, and in many places it is so abundant as to be workable. At one place there is a thickness of 12 in. of kidney ore which lies at the top of the deposit. Below the kidney ore is a hard blue rock 18 in. thick, running, it is said, 60 per cent. in bone phosphate. Below the blue rock is a fine, hard gray rock 18 in. thick, which analyses 75 per cent. of phosphate of lime. It will be seen, therefore, that, including the bed of kidney phosphate, there is on Indian Creek a deposit 5 ft. thick. Excluding the kidney ore, the deposit is 4 ft. thick. The brown rock on Indian Creek may be mined with a pick and a spall fork. The blue and gray rock, which is the most valuable of all the deposits, though a little more costly to mine, requires blasting in many places.

Several companies and private concerns in Hickman County were actively engaged in mining phosphate in 1894 and 1895. Altogether, 141,000 tons have been taken out and shipped from this field since 1894.

IMPERIAL PENNY POSTAGE.—It is stated on good authority that Imperial penny postage will come into operation on November 9th next, the Prince of Wales's birthday, by which day the necessary preparations are expected to be complete.

Official Memoranda.

From the Board of Trade Journal.

REVISED TARIFF OF BRITISH INDIA.

	Previous Val.	Revised Val.
Paints, colours, painters' materials, and compositions for application to leather, wood, and metal—	Rs. a.	Rs. a. p.
Ochre, other than European, all colours	1 8	1 4 0
Dammer	5 8	5 0 0
Pitch, coal	2 8	3 8 0
Tar, coal	4 0	3 8 0
Seeds—		
Castor	5 0	6 8 0
Linseed	7 8	6 0 0
Rape or sarson	6 0	7 0 0

TARIFF CHANGES.

A despatch has been received at the Foreign Office from H.M. Ambassador at *St. Petersburgh* relative to certain changes in the classification and rates of duty, under the Russian customs tariff, on agricultural machinery and implements, fertilising substances, and chemical products and preparations required for agricultural purposes as follows :—

Gluten (*ermish*), for the destruction of insects on trees, shall be cleared free of duty.

Stassfurth salts (*abraum-salz*) even if ground, chloride of potassium (*kalium chloratum*), neutral sulphate of potassium (*kalium sulfuric*) duty free.

Point 1. Chilian saltpetre (nitrate of soda) duty free.

Carbon bisulphide duty free.

The following decisions relating to the classification of articles in the Customs Tariff and the application of the customs laws of the *United States* have recently been given by the authorities in that country.

So-called *dead oil* or *tar oil*, which is not known commercially or scientifically as distilled oil, is entitled to free entry as a preparation of coal tar under 443, Act of 1894

Carbolineum or *tar oil*, is free of duty as a product of coal tar under paragraph 443, Act of 1894.

All *Indigo* is to be admitted free of duty, whether derived from Bengal plants or coal tar products.

Ground sulphide of antimony ore is free under paragraph 476, Act of 1897. The mere rough grinding of the ore, for convenience of transportation, is no bar to free importation under the said paragraph.

PRODUCTION OF SALT IN BRITISH INDIA.

According to statistics issued by the India Office, the total quantity of salt produced in India in 1897 was over 23¼ millions of maunds (Indian maund=82⅔ pounds). This was much less than the production of 1895 and 1896, but the production fluctuates according to seasonal conditions. This quantity was supplemented by 13,300,966 maunds of imported salt, the total quantity produced and imported amounting to 37,162,714 maunds, over 64 per cent. of the whole being produced in India. Importation is practically limited to salt brought to Bengal and Burma from England, Germany, other countries in Europe; Aden, Muscat, Jeddah, and a few other places. Only a quite insignificant quantity is imported elsewhere than in Bengal and Burma, but there is also a trifling trans-Himalayan import. The localities where salt is manufactured are these :—

	1895. Maunds.	1896. Maunds.	1897. Maunds.
Burma—Coast, and some brine wells in Upper Burma ...	525,812	479,459	598,221
Bengal—Orissa chiefly ...	178,460	195,000	162,351
Northern India—			
Sambhar	5,375,046	2,715,236	2,382,888
Panjab mines and Kohat ...	2,635,817	2,881,064	1,927,375
Rajputana sources other than Sambhar	1,420,678	974,850	854,098
Mandi, Sultanpur, Gwalior, and the saltpetre refineries	338,439	339,275	309,235
	9,769.980	6,910,425	5,473,596
Sind—Moach (near Karachi), Saran and Dilyar deposits ...	296,835	257,338	280,115
Bombay—Coast and Runn of Kutch...	11,162,639	9,342,839	10,768,345
Madras—East Coast	8,931,840	9,495,776	6,579,120
Total	30,865,566	26,680,837	23,861,748

Consumption and Revenue.—In 1897-98, 34,521,723 maunds of salt paid duty, the duty realised amounting (exclusive of miscellaneous

receipts) to Rx. 8,417,447, the quantity being 1·35 per cent. and the duty 2·13 per cent. more than in the previous year.

FERTILISERS IN THE UNITED STATES.

During the past few years several efforts have been made to secure reliable information concerning the production of fertilisers in the United States, both in respect to the number of fertiliser factories and their approximate output. Owing to the unsatisfactory response received from a great many of the factories it has been impossible to obtain statistics which are in any sense complete. The Federal Department of Agriculture has, however, recently issued a pamphlet giving the results of an investigation of the subject which has been carried on under the direction of a competent statistician. The compilation of facts on the subject gives the number of establishments engaged in this line of manufacture at the present time to be about 700. The census of 1890 reported the number to be 390, and that of 1880 reported 364. It is to be noted, therefore, that there has been since 1890 a very considerable development of this industry. This is especially noticeable in South Carolina and Florida, where phosphate mining has assumed large proportions.

While the statistics concerning the production of this article of commerce are so difficult to secure, it has been possible, with the aid of the State fertiliser inspectors, to obtain information of a reliable character concerning the amount of the product consumed. The returns for the calendar year 1896 show that the entire consumption of commercial fertilisers during the year in the States amounted to 1,894,917 tons. Georgia stands first among all the States as a consumer of the product, the quantity used in that State during the year being 335,618 tons. South Carolina follows with 199,497 tons, then come in order, North Carolina, 187,429 tons; Virginia, 171,704 tons; New York, about 150,000 tons; Pennsylvania, about 150,000 tons; and Alabama, 100,000 tons. The remaining States each consumed less than 100,000 tons.

The extent to which the phosphate industry has grown in the United States is shown by a table included in the Department's report from which it appears that of a total of over 1,500,000 long tons of the material produced and nearly as large an amount consumed in the world during the year 1891, about one-half was produced and about one-third consumed in the States. With regard to the foreign trade in fertilisers the imports of this class of product for 1896 were about 375,734 long tons, valued at £1,537,000., while the exports for the same period amounted to 514,143 tons with a value of £917,000.

YORKSHIRE COLLEGE DYEING DEPARTMENT.

IN his report for the session of 1897-8, Prof. Hummel states that the work of the Dyeing Department has been conducted on the same general lines as have been followed in previous sessions. Nevertheless, in consequence of the continual discovery of new colouring matters, possessing novel features and requiring difference of treatment in their application, there is never any lack of variety and interest connected with the work of the students.

During the past session special interest has been taken in the experiments dealing with the application of colouring matters to union fabrics, more particularly those composed of wool and silk. A preliminary paper on some of the results obtained was read before the College Textile Society by Mr. R. B. Brown, the assistant lecturer and demonstrator, but it is intended to give a more complete account of the work in one of the technical journals at an early date.

Considerable progress has been made in the testing of dyed colours with respect to their behaviour towards various agencies, which will enable us to classify them according to their suitability for various branches of the dyeing trade. We hope to be in a position to tabulate and publish some of the results obtained next Session.

In connection with leather, special attention has been devoted to the dyeing of wash-leather, and with very satisfactory results.

The dyeing of short piece-lengths woven in the textile department, initiated last year, has been continued with success. The students find the work interesting, and we only await the completion and equipment of the new building to make it a prominent feature in the routine of the department.

During the session a number of special experiments have been made on behalf of the chemical department of H.M. dockyard, Portsmouth, with the view of recommending a more suitable yellow dye for bunting than the one at present adopted, with the result that the Admiralty chemist has recently reported that the results obtained have proved to be generally very satisfactory.

For the Imperial Institute, experiments have been made in dyeing with certain specially prepared catechu and mangrove extracts.

The study of the action of light on dyed colours has been continued throughout the session. This work is carried out under the the auspices of one of the Committees of the British Association, which has made a further grant of money for the continuance of the work.

The research work of the Department has been continued by Mr. Perkin, with the assistance of two of our advanced students, the work of the session being embodied in the following papers:—

1. The yellow colouring matters contained in *Rhus rhodanthema*, *Berberis aetnensis*, and *Rumex obtusifolius*.
2. Constituents of the Indian dyestuff "Asbarg," *Delphinium zalil*.
3. Salts of some natural yellow colouring matters.
4. The yellow colouring principles contained in various tannin matters, sumach adulterants. Part V.
5. Constituents of the Indian dyestuff "Waras," *Flemingia congesta*.
6. The colouring matter of *Arctostaphylos uva ursi*.
7. Azobenzene derivatives of some natural yellow colouring matters.
8. The colouring matter of the New Zealand dyestuff, *Vitex littoralis*.

These papers are published at stated intervals in the Journal of the Chemical Society of London, and it is gratifying to know that the importance of the work is recognised and appreciated, for in aid of its continuance, a further sum of £25. has recently been granted from the research fund of the Society.

The subjects dealt with refer to the chemistry of the colouring matters contained in a variety of plants used as dyestuffs in different parts of the world, and, as may be well imagined, the mere collecting of the necessary material for investigation is attended with considerable difficulty. For valued assistance in this matter we are indebted to the following gentlemen, to whom our best thanks are due:—Mr. Purchas, Auckland, New Zealand; Professor Trimble, Philadelphia, U.S.A.; the Vice-Consul, Palermo; the Directors of the following public institutions: the Government Department of Agriculture in Cyprus; the Technological Museum, Sydney; the Botanic Gardens, Kingston, Jamaica; the Imperial Institute, London; the Royal Botanic Gardens, Kew.

The marked success of the students of the department, in the City and Guilds of London Technological Examinations in dyeing held in 1897, is worthy of notice. With one exception, an evening student, all who entered for these examinations were successful, and in the ordinary grade the prizes and medals offered for competition in the subject of wool dyeing were won by students of this department.

It may be well to mention that the competition for the Clothworkers' Dyeing Scholarships has this year been more marked than heretofore. The Entrance Scholarship has been awarded to Mr. W. F. Pocklington, and the Advanced Scholarship to Mr. F. J. Newbury.

The work of the evening classes was inaugurated as usual by a free public lecture, the subject being "The Wool Fibre." The meeting, which was well attended, was presided over by Mr. A. G. Lupton.

The general progress shown by the students attending these classes may be considered satisfactory, but there is no special feature to record in connection with the work. Several of the students have been engaged with experiments bearing specially upon the business with which they are connected, and the results obtained have been useful to them in practice.

The number of students attending the department during the session was: day classes, 30; evening classes, 18; the entries for the various classes being as follows:—

	Day Classes.	Evening Classes.
Practical Work	.. 28 ..	.. 16
Lecture Courses	.. 27 ..	.. 12
	55	28
Total entries	83	

The following distinctions have been gained by students of this department:—

CITY AND GUILDS OF LONDON TECHNOLOGICAL EXAMINATION.

WOOL DYEING.—*Honours Grade*: Passed 1st Class, two. Passed 2nd Class, two. *Ordinary Grade*: 1st Class, Ernest Alfred Hooper, 1st place, the Dyers' Company's prize of £2 and the Institute's silver medal. David Waterhouse Raine, 2nd place, the Dyers' Company's prize of £2 and the Institute's bronze medal. Passed seven others. Passed 2nd Class, four.

COTTON DYEING.—*Honours Grade*: Passed 1st Class, one. *Ordinary Grade*: Passed 2nd Class, One.

SILK DYEING.—*Ordinary Grade*: Passed 1st Class, one.

COAL AND TAR PRODUCTS.—*Ordinary Grade*: Passed 2nd Class, one.

THE RESIN MARKET.—There has been a decline in the prices of common and medium grades. Receipts have been somewhat in excess of last year, but a fair and steady demand is being experienced. Pales are still firmly held, although the business in this description is not at present large. Low steamer rates have had a depressing influence on the other grades, and a reaction in prices on a recovery in the freight market is predicted. The London market has been dull, but is now showing symptoms of increasing demand. In Liverpool the influence of declining steamer rates has been very apparent in the weakening of resin prices.

Trade Notes.

The Flash-Point of Petroleum.—On Wednesday the Public Control Committee of the London County Council brought up some recommendations dealing with the report of the Select Committee on Petroleum. Early in the present Session a copy of the last report of the chief officer of the Council's public control department as to the prevention of lamp accidents was forwarded to the Select Committee with an intimation that the Council recommended that the flash-point fixed by the Petroleum Acts should be raised to 105° Fahr. (Abel test), and that the sale and use for illuminating purposes of oil below that flash-point should be prohibited. The Committee, after setting out several of the recommendations of the Select Committee's report, state that they are satisfied for reasons given at length in the chief officer's report that raising the flash-point to 100° will not increase the price of illuminating oil to the consumer, and that it will be the means of preventing nearly the whole of the accidents and deaths from the use of petroleum lamps which are now constantly taking place. They agree with many of the recommendations of the Select Committee, and trust that they will in due course become law; but they are deeply impressed with the urgent necessity of raising the flash-point at once. They consequently made the following recommendation to the Council:—"That a letter be addressed to the Home Secretary urging that the Government should introduce and endeavour to pass during the present Session a short Bill for raising the flash-point named in the Petroleum Act of 1879 from 73° Fahr. to 100° Fahr. (Abel test)."

Chemical Trade of San Francisco.—The British Consul for this district reports that owing to the extended operations of the chemical manufacturers of the Eastern States of America and the increase in the duty under the new tariff, the importation of chemicals into this market is likely to fall off materially.

The Bacteriology of London Sewage.—We have received a copy of Dr. F. Clowes's first report on the Bacteriology of crude London sewage. It contains much interesting matter, and is illustrated by a collection of microphotographs. We notice that the search for Diphtheric and Typhoid baccili is deemed to be a waste of time. Copies can be obtained from Messrs. S. P. King & Son, 9 Bridge Street, Westminster, at 7d. each post free.

Boiler Inspection.—The warnings and hints to boiler tenters issued by the Manchester Steam Users' Association have been reprinted in a handy pamphlet form. It will be wise for all users of boilers to procure a copy from the officials of the Association, 9 Mount Street, Manchester. A short sketch of the life of Mr. L. E. Fletcher, the late chief engineer, has been incorporated with the "Advice to Boiler Attendants," together with comparative figures, showing the cost of boiler explosions.

Fire at a Chemical Works.—An outbreak of fire occurred on Saturday night at Messrs. E J. Potter and Co.'s chemical works, Little Lever, near Bolton, causing damage to the amount of £300. The Bolton and Farnworth Fire Brigades were both present, and the flames were, after three hours' work, mastered. The fire is stated to have originated in one of the rectifying rooms, which contained over thirty retorts charged with vitriol, and the firemen were subjected to some risk owing to these bursting as they became heated.

American Chemical Trade.—Shipments of fertilisers from the port of Charleston from September, 1896, to April, 1897, amounted to 352,669 tons, and from September, 1897, to April, 1898, to 344,372 tons; showing a decrease of 8,297 tons. The largest monthly shipment during these two periods was in February, 1898, 133,086 tons, and the smallest quantity of fertilisers was sent forward in September, 1897, 4,146 tons. The total shipments were distributed as follows:—By South Carolina and Georgia Railroad, 330,302 tons; Charleston and Savannah, 202,847 tons; Atlantic Coast Line, 146,651 tons; river steamers, 9,256 tons; various, 7,985 tons; total, 697,041 tons.

The Pomona Chemical Company, Limited.—At the Liverpool Sittings of the Chancery of Lancaster, before Vice-Chancellor Hall, this week, Mr. Montgomery presented a petition by creditors for winding up the Company. There was no opposition. The case was before his Honour three weeks ago at Manchester, on an application for a compulsory winding up, but it stood over, on terms agreed to, to enable the Company to pass a resolution for voluntary liquidation. A resolution to that effect was passed on the 13th July. Mr. Hornby was appointed liquidator, and it was proposed to continue him on his giving the usual security for a winding up under supervision, and he asked for an order accordingly.—Mr. Robey, for the Company, consented.—His Honour granted an order accordingly, the liquidator to report to the Registrar of the Court every six months.

Water Softening.—A paper describing the Archbutt-Deeley water softening and purifying plant, which is made by Messrs. Mather and Platt Ltd., Salford, was read before the annual meeting of the Institute of Mechanical Engineers, at Derby, on Wednesday. The discussion, which was taken part in by a large number of the members, turned to a considerable extent on the effect of deposit in boilers in regard to fuel economy. One speaker advanced the proposition that by the deposit of scale on the exterior of a tube the heating surface would be increased, and that, therefore, the boiler might become more efficient in evaporation. Another point brought out was that hard scale is very much less deleterious than a soft deposit. The general opinion appeared to be that for water with any hardness in it a softening process of some kind is economical; that it is cheaper to soften water before putting it into a boiler than to allow it to deposit on the inside of the boiler and to have to clean the boiler afterwards

The Use of Foreign "Degrees."—A Bill to regulate the use of certain University degrees in Great Britain and Ireland, introduced into Parliament by Mr. J. W. Sidebotham, and supported by Sir William Houldsworth, Mr. Carson, Dr. Farquharson, Sir J. Lubbock, Mr. McNeill, and Sir William Priestley, has been issued. The object is to distinguish between persons who have taken degrees in the various faculties at the Universities of the United Kingdom, or have had degrees conferred upon them *honoris causa* by due authority in the United Kingdom, and those persons who have received degrees from other sources. It is proposed that any person who attaches to or who is responsible for the attachment to his name of the degree of bachelor, master, or doctor of any faculty in which degrees are granted, and who does not place and clearly indicate after such degree the source from which it has been received shall, unless such degree has been received from one of the Universities of Great Britain and Ireland, or from any authority in the United Kingdom which confers degrees by virtue of a royal charter, or by the sanction of the Crown or of Parliament, be liable to be summoned before a court of summary jurisdiction for such offence, and upon conviction shall pay a sum not exceeding forty shillings in addition to any costs which may be imposed.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are dull and neglected even with both 90's and 50/90's freely offered at 10d. There is no change in carbolic acids, there being a fair market. Crude naphtha fluctuates between 4d. and 5d. according to quality and position. Solvent remains at 1s. 3d. Creosote is about the only good thing, there being a fair demand at full prices, namely, 2½d. to 2¾d. for ordinary. Anthracene is depressed, 30% A being quoted 4½d. and B 3½d. Pitch is fairly well maintained in value at 23s. 6d. to 24s. f.o.b. East Coast, but is very slow of sale.

There has been an active market for sulphate of ammonia during the week, and plentiful sales (especially for covering purposes) have been made at advanced prices. In the forward section, Beckton is now quoting £9. 7s. 6d. Oct./Dec., and £9. 10s. for Jan./Mar. delivery. Closing prompt values are:—Beckton, £9. 10s. London outside makes £9. 12s. 6d.; Liverpool, £9. 12s. 6d.; Hull, £9. 10s, and Leith, £9 12s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade generally business still continues quiet. For caustic soda quotations are slightly lower on the higher strengths, but there is no material change, and on the whole spot prices may be taken as follows, viz.:—f.o.b. Liverpool, 77%, £8. 2s. 6d.; 74%, £7. 17s. 6d.; 70%, £7. 2s. 6d.; 60%, £6. 2s. 6d. per ton, 10-ton lots. Bleaching powder is in poor request at £5. to £5. 2s. 6d., softwoods, f.o.r., and £5. 10s. hardwoods, f.c.b. Alkali, 58% steady at £4. 2s. 6d., bags, f.o.r. makers' works. Saltcake is scarce and dearer at 24s. to 25s. f.o.r., and there is more inquiry. Sulphur unchanged at £4. 10s. to £4. 12s. 6d. per ton Chlorate of potash is firm at 3⅜d. Chlorate of soda easy at 3½d. per lb. In white powdered arsenic more business is moving at £15. per ton. Nitrate of soda is offered at rather easier spot rates, nearest value being £7. 7s. 6d. f o r. Sulphate of copper is steady on the whole, but quotation is a little lower at £16. 7s. 6d. f.o.b. For potash, caustic and carbonate, there is a fair inquiry at current rates. Prussiate of potash firm at 6½d. to 6⅝d. per lb. Prussiate of soda 5d. to 5¼d. per lb. Sulphocyanides are quiet. Cyanide firm at 1s. 3d. per lb. Brown acetate of lime has settled down firm at £5. 2s. 6d., and grey at £7. 5s. per ton c.i.f. Acetate of soda rather dearer. Acetic acids unchanged. Aniline oil and salt steady in price, but demand is light. Sulphate of iron is in fair general request and price rather easier. Ammonia salts,

generally, are cheaper. Oxalic acid is reduced to 3d. There is a prevailing quiet tone throughout the whole chemical trade.

REPORT ON MANURE MATERIAL.

The market is firm in all departments and, although actual business done has not been large, full prices have been realised.

There is large inquiry for high grade phosphates on the Continent for 1899 shipment, and business is reported at advanced prices. The closing value delivered at U.K. ports for 77/80% Florida rock, must now be put at 6¾d. to 7d. per unit. The quotation for South Carolina and similar grade Algerian rock remains at 6d. to 6¼d. per unit, 1899 shipment.

A cargo of River Plate bones has been sold, but price is not reported; presumably at about £4. 8s. 9d. per ton. Shippers of East Indian bone meal are still quoting £4. 10s. ex quay Liverpool, but actual value is probably 2s. 6d. per ton less than this. Nitrate of soda is firm at 7s. 6d. per cwt. for fine quality, on spot.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron quiet: Scotch warrants closed at 46s. 6d.; Middlesbro', 40s. 6½d cash; and hematite, 51s. 6d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed at £49. 18s. 9d. to £50. 3s. 9d. cash, and £50. 5s. od. to £50. 10s. od. three months. Tin firm: Straits closed at £71. 3s. 9d. to £71. 13s. 9d. cash, and £71. 10s od. to £72. 0s. od. three months; Australian, £71. 15s.; English ingots, £74. 0s. od. to £74. 10s. od. Lead easier: Spanish, £12. 17s. 6d. to £12. 18s. 9d., English, £13. 2s. 6d; Silesian spelter, ordinary, £20 0s. od. Nickel, 1s. 2½d. Antimony, £36. 10s. to £37. Quicksilver: First hands, £7. 12s. 6d.; second hands, £7. 12s. *Copper shares* steady: Cape, 4⅝ to 4¼; Copiapo, 2¼ to 2⅜; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅛ to 3⅜; Rio Tinto, 27 7/16 to 27 9/16; Tharsis, 6½ to 6¾.

GLASGOW, Wednesday.—Market firmer, and a good business. Scotch done at 46s. 6d. cash, and 46s. 8½d. month; buyers, 46s. 6d. cash, sellers, ½d. higher. Cleveland done at 40s. 6½d. to 40s. 7d. cash, and 40s. 9d. to 40s. 9½d. month; buyers, 40s. 6½d. cash; sellers, 1d. more. Cumberland hematite done at 51s. 6½d. cash, and 51s. 9d. month; buyers, 51s. 6d. cash; sellers, ½d. dearer. Middlesbrough hematite, buyers, 51s. 6d. cash; sellers 51s. 9d.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is scarce, and there is not much doing in Lagos; prices are firm, both for spot and to arrive. Olive is firm, and inclined to advance in price. There is only a limited business passing, but Malaga has been done at £29. per tun, to arrive. Linseed keeps steady, with a fair inquiry for Liverpool makes in export casks at 18s. to 18s. 6d. Cottonseed unaltered in position, prices remaining at 15s. 9d. to 16s. 3d. for Liverpool refined. Castor oil is rather easier, and considerable sales of good seconds Calcutta have been made, but price has not been declared; otherwise there is only a small trade doing, with Calcutta 3¼d, French and Madras 3d. to 3 1/16d. per lb. Tallow is in good demand at full prices. Resin is moving well in all grades at last quotations. Spirits of turpentine quiet at 22s. 6d. per cwt. Petroleum dull and little doing, with American 5⅞d. to 7¼d., and Russian refined 5d. per gallon.

CAKES.—An improved demand has been experienced for parcels of choice American Western linseed on the spot, and a fair amount of trade has been concluded at previous currencies, viz, £5. 13s. 9d to £6. 2s. 6d., but Liverpool makes continue to move off to only a limited extent at former rates, viz., £7. 5s. to £8. per ton, according to brand. The tone of the market for American decorticated cottonseed continues quietly steady, and good to choice brands are still offering at £5. 5s. to £5 17s. 6d., according to quality; Liverpool makes continue very slow of sale, but in the absence of pressure to sell there is no change in the quotation, which is still given at £6. to £6 10s. per ton, according to brand. Home crushers of undecorticated Liverpool makes are steady in their requirements, viz., £3. 17s. 6d. to £4. 10s., according to brand, but experience only a very moderate inquiry thereat, whilst for Egyptian on the spot there is very little inquiry, and the quotation is unaltered at £3. 12s. 6d. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9.s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets here continue very easy, with goods in slow demand, the prices generally have a tendency to recede. The imports for the current year to date as against the same time a year ago have been:—Wheat, 1,533,431 qrs. against 1,321,133 qrs; linseed, 211,347 qrs. against 344,220 qrs; rapeseed, 42,285 qrs against 52,955 qrs.; cottonseed, 116,551 tons against 120,426 tons; oil cake, 8,355 tons against 6,872 tons; olive oil, 4,101 tuns against 3,238 tuns; tar, 1,013 brls. against 1,953 brls. Lineeed oil is ruling slow, and quoted 15s 7½d., spot, naked; forward, 15s. 4½d.; last four months, 14s. 9d. per cwt.; refined and boiled, £1. to £1 10s. per ton extra. Refined cotton oil dull, spot, 13s. 6d., naked, the same being the quotation to August; forward, Nov./April, 13s. 3d.; crude is quoted 12s. 4½d., spot; casks, £1., and ordinary barrels, £1. 10s per ton extra. Castor oil, extracted here, first pressure, £28. per ton, in barrels – 3 3/16d. per lb. in cases; second pressure, £27. per ton, in barrels—3 1/16d. per lb in cases of 4 tins. The tendency of values of olive oil is to advance, though difficult to realise. Olive oil soaps have advanced to such rates as to place themselves out of the market. Resins in fair demand, prices unchanged. Cod oils £17. to £19. per ton, in casks.

CAKES.—The situation here is little changed; the demand is quiet, yet values are maintained, the most serious feature being the large quantities imported whilst the mills here are idle. Linseed cakes steady, 95% pure, £7. to £7. 2s 6d. Oilcakes (linseed), £6. 2s 6d. to £6. 5s.; Russians, £6. 15s. to £7; prime Americans, £6. 5s. to £6. 7s 6d. Cotton cakes unchanged—best makes, £4 to £3. 18s. 9d.; seconds, £3. 15s to £3. 16s. 3d. Decorticated £6. 2s. 6d. Meal £6. 2s. 6d. Rape cakes unchanged.

PAINTS.—Makers continue busy, and realise prices according to the reputation in the market. Mixed paints in tins are much competed for. Disinfecting powder: 5% carbolic, £3.; 10%, £3. 10s.; 15%, £4; 20%, £4s. 10s. per ton. Sanitary fluid, 10d. to 1s. per gallon. Black varnish, £5. 10s. per ton in barrels.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Production after holiday stoppage has not yet been quite fully resumed, but almost so. The tone of the market is fairly good, as things have been going of late and prices have in no case given way. Chlorate of potash is more in demand and the price has been moved up a notch. Sulphate of copper also is dearer, the recent tendency upward being steadily persevered in so far. The shipping department of the market in chemicals is no worse—perhaps even a little better. Sulphate of ammonia has continued healthy, and some of the makers are already looking for something over £9. 7s. 6d. prompt, Leith. Forward dealing is very quiet. Nitrate of soda is also decidedly firmer. Mineral oils and paraffins all stand at the old prices meanwhile, but the feeling in burning oil is certainly stiffer and makers are talking of a possible advance of one farthing a gallon. They will confer early in August, and if possible, agree as to market terms for the new season.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s 6d. nett Tyne, soda ash, 48/52°, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, 48/52°, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 10s. to £5. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d, and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s. od. nett, Tyne; saltcake, 25s od.; borax, English refined, £14., and boracic acid, £24. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt casks, £6. 15s. nett, Liverpool; bichromate of potash, 3¾d. less 5%, for Scotch and English deliveries (for export, 3½d. nett, f.o b. Glasgow); bichromate of soda, 3d. less 5%, for Scotch and English deliveries (for export, 2¾d nett, f.o.b. Glasgow); chlorate of potash, 3½d. less 5%, Liverpool: nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £9. 7s. 6d. to £9. 8s. 9d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port; sulphate of copper, £16. 15s. less 5% Liverpool; paraffin scale, hard, 1¾d. to 1½d. per lb., soft, 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 5¾d., and crystal, 6d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 151,485 mats cane unrefined, and 19,817 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals show little or no alteration and sulphur continues scarce at £5. per ton nett. Soda crystals are in fair demand at £2. 12s. 6d.

per ton, gross weight, locally. Caustic soda quiet, at £7. 5s. to £7. 10s. per ton for 70% ; 76/77%, £8. 5s. to £8. 10s. per ton.

Bleaching powder, softs. £5. 10s. per ton, nett : do. hards, £5. 15s. per ton, nett ; caustic soda, 76/77% £8. 10s. and 70% £7. 10s. per ton, nett ; recovered sulphur, 2 cwt. bags, £5. 0s. per ton, nett ; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett ; do., 52%, £4. 5s. per ton, nett ; alkali, 36%, £3. 12s 6d. per ton, nett : white alkali, 48%, £5 per ton, nett; do., 50%, £5. 5s. per ton, nett ; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett ; do., 1 cwt. kegs, £7. per ton, nett : silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett ; do., 100° Tw., £3. per ton, nett ; do., 140° Tw., £3. 7s. 6d. per ton, nett ; soda crystals, casks, £2. 12s. 6d. per ton, gross weight : do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett : pure white sulphate of alumina, £3. 17s. 6d. per ton, nett : blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; sulphide of barium crystals, £4. 15s. per ton, nett ; carbonate of alumina, £30. per ton, nett : aluminate of soda, £30. per ton, nett.

Salt continues firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—There is still great demand for coals and prices are firm. Best Northumbrian steam is 13s. 6d. per ton f.o.b., and small steam is 6s. per ton. Coke is steady with no change in prices.

New Companies.

City Chemical Co. of Birmingham, Ltd.—Capital £1,000. in £1. shares. This company has been formed to manufacture and deal in sulphuric acid and chemicals. Registered office, 58, Summer Row, Birmingham.

Carbides, Ltd.—Capital £50,000. in £1. shares. This company has been formed to acquire, own, and work inventions for the production of carbides of calcium, magnesia, etc., to adopt an agreement with the London and Northern Syndicate, and to carry on the business of metallurgists, smelters, etc. The subscribers to the memorandum of association are :—J. S. Goodwin, 4a, Bethune-road. N., traveller; J. W. Wallsgrave, 11, Mint Walk, Croydon, gentleman ; H. L. Fox, 32, Gt. St. Helen's, E.C , manufacturer ; W. A. Byrom, 32, Gt. St. Helen's, E.C., gent ; H. Auerbach, 2, Rosemont Mansions, Lithos-road, N.W., gent ; A. P. Beyrouth, 41, Woodhouse Grove, E. Ham, traveller ; F. E. L. Fox, 32, Gt. St. Helen's, E.C., accountant.

Erith Lead Co., Ltd.—Capital £20,000. in £1. shares. This company has been formed to carry on the business of smelters, manufacturers of and dealers in lead and lead oxides, chemists, drysalters, oil and colourmen, etc., and to adopt agreements with the Lead Oxide Co , Ltd., and the Scottish Oil and Chemical Co., Ltd. The subscribers to the memorandum of association are :—W. Weston, 33, Inverness Terrace, W., gent ; G. P. Wright, 14, Verner-road, Sydenham, clerk ; R. W. Fry, 47, Clifden-road, Clapton, clerk ; G. V. Barton, Frodsham, Cheshire, gent ; V. J. Barton, 15, Walbrook, E.C., iron merchant ; C. W. Matthews, 25, Budge-row, E.C., clerk ; A. Starr, 32, Mysore-road, Lavender Hill, S.W., clerk. Registered office, 30, Moorgate-street, E C.

Fraser River Oil and Guano Synd., Ltd.—Capital £30,000. in £1. shares. This company has been formed to acquire, develop, and turn to account the benefit of an invention for manufacturing fish oil and guano-fertilizer out of fish offal. The subscribers to the memorandum of association are :—A. Howard, 27, Piccadilly, W., gentleman ; A. G. Edwards, Lansdowne, Rustington, Sussex, gentleman ; G. Howard, 8, West Chapel-street, Mayfair, gentleman ; D. G. Spiro, 3, Copthall Court, E.C., gent ; R. Curzon, 14, Grafton-street, W., gentleman ; C. Staniforth, 2, Gresham Buildings, E.C., merchant ; J. W. Traill, Castle Hill, Thurso, N.B., gentleman.

Pansy Soap, Ltd.—Capital £60,000. in £1. shares (20,000 7% cum. pref.). This company has been formed to adopt an agreement with G. H. Longuehaye, and to acquire and work a secret process for the manufacture of an antiseptic and inodorous soap. The subscribers to the memorandum of association are :—J A V. Churchill, 68, East Dulwich Grove, S.E., student ; S. M. Bond, 1, St. Andrew's Villas, S. Woodford, clerk ; H. Washbrooke, 6, Lancell-street, Stoke Newington, clerk ; G. Williams, 21, Alderney-street, Pimlico, S.W., clerk ; E. Farrance, 59, Maryland-road, Paddington, gentleman ; H. E. Jerome, 28, Oakley-road, Bromley, Kent, clerk ; F. V. Hall, 4, Charnock-road, Clapton, N.E , clerk.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending July 16th.

Acetic Acid—

Holland,	40 pks.	A. & M. Zimmermann
,,	50	R. W. Greeff & Co.

Acetone—

France,	2 drs.	P. F. Knowlden

Alkali—

France,	110 c.	J. Harrison
,,	49	J. Barber & Co.

Anhydrous Ammonia—

Holland,	24 pks.	H. Lorenz

Antimony Ore—

Turkey,	96 t.	M. D. Co.

Arsenic—

Belgium,	5 pks.	A. C. Lloyd

Asbestos—

Canada,	£610	W. Byford
Italy,	133	Imperial Asbestos Co.

Barytes—

Germany,	38 pks.	J. R. Francis & Co.
,,	102	W. Harrison & Co.
Belgium,	70 brls.	,,
Holland,	56 cks.	,,
,,	16	J. Owen
Belgium,	388 pks.	J. L. Lyon & Co.
Germany,	29 cks.	,,
,,	17	H. Lambert

Bleaching Powder—

Germany,	99 cks.	J. M. Steel & Co.

Bleaching Soda—

Germany,	140 c.	H. Lambert

Bones—

Melbourne,	3 t.	Flack, Chandler & Co.
Rockh'pt'n,	193	Dalg ty & Co.

Bromine—

Germany,	30 pks.	A. & M. Zimmermann

Caoutchouc—

France,	28 c	Girard Brs. & Co.
Straits,	414	Butler's Wf., Ld.
,,	22	Huttenbach & Co.
Holland,	4	Lewis & Peat
Straits,	1,089	E. Boustead & Co.
,,	470	H. W. Jewesbury & Co.
Belgium,	38	Leach & Co.
Straits,	56	L. & I. D. Jt. Co.
Zanzibar,	38	,,
France,	70	Prop. Bull Wf.

Carbolic Acid—

Germany,	25 pks.	J. G. Back

Castor Oil—

E. Indies,	25 cs.	L. & I. D. Jt. Co.
France,	5	Vokins & Co., Ld.
,,	10 cks.	C. S. Lovell
E. Indies,	200	Cayzer, Irvine & Co.
,,	100 cs.	Dundee, Perth, & L. S. Co.

Chemicals *(otherwise undescribed)*

France,	£258	Mory & Co.
Holland,	10	J. Barber & Co.
Germany,	15	R. W. Greeff & Co.
,,	970	A. & M. Zimmermann
,,	410	L. & I. D. Jt. Co.
,,	9	Butler's Wf., Ld.
,,	15	T. H. Lee
Belgium,	28	T. Palmer
,,	44	John Cockerill Line
,,	20	C. Atkins & Nisbet
Holland,	93	T. H. Lee
Belgium,	90	,,
Holland,	14	Phillipps & Graves
Germany,	36	Craven & Co

Corrosive Sublimate—

E. Indies,	1 cs.	H. S. King & Co.

Cream of Tartar—

Spain,	5 pks.	B. & F. Wf. Co.
Holland,	32	Kirkpatrick, Barr, & Co.
France,	12	B. & F. Wf. Co.
,,	5	M. Ashby, Ld.
,,	5	W. C. Bacon & Co.

Disinfectants—

Germany,	£23	A. & M. Zimmermann
U. States,	51 cs.	Lunham & Moore

Dyestuffs—

Argols

Italy,	1,521 pks.	B. Jacob & Sons
,,	163	Thames S. T. & L. Co.

Cutch

U. States,	500 pks.	H. A. Litchfield & Co.

Divi Divi

E. Indies,	250 pks.	G. S. N. Co.

Extracts

France,	115 pks.	L. J. Levinstein & Sons
Canada,	165	Boutcher, Mortimore & Co.
,,	40	Furness, Withy & Co.
Holland,	5	Phillipps & Graves

Gambier

Straits,	859 pks.	G. R. Haller, Ld.
,,	453	J. Greig

Indigo

E. Indies,	9 chts.	Croysdale & Co.
,,	228	Lewis & Peat
,,	51 pks.	J. W. Cook & Co.,

Myrabolams

E. Indies,	1,333 bgs.	J. Grieg
,,	3,000 pokts.	P. & O. Co.
,,	4,000	Montgomerie & Workman

Saffron

Spain,	1 cs.	Nich's Wvs , Ld.

Shumac

Italy,	200 pks.	J. E. Scott
,,	1,400 bgs.	J. Kitchin, Ld.
,,	68	R. Waters
,,	300	W. Shelcott
,,	100	C. S. Lovell
,,	50	A. E. Piggott

Tanners' Bark

Melbourne,	200 t.	Escombe Brs. & Co.
N. Zealand,	15	Von der Meden & Co.
Adelaide,	49	H. Devitt & Co.
Belgium,	18	Leach & Co.

Turmeric

E. Indies,	10 bgs.	Soundy & Sons

Valonia

A. Turkey,	120 t.	M. D. Co

Dyestuffs *(otherwise undes.)*—

France,	15 bls.	Burnett Brs. & Sons

Farina—

Germany,	50 pks.	R. Bennett & Co.
Italy,	260	Kearley & Tonge
U. States,	22	W. Wingate & Johnston
Sydney,	13	Co-op. W. Soc., Ld.
Italy,	900	Wrightson & Son
,,	484 bxs.	C. Tennant, Sons & Co.
Holland,	300 bgs.	R. Bennett & Co.

Glucose—

U. States,	50 pks.	386 c. Ldn. & Til Ltge. Co
U. States,	100	530 Ohlenschlager Brs.
,,	2,149	6,911 R. G. Hall & Co.
,,	50	1,930 C. & E. Morton
,,	50	300 Page, Son & East
,,	150	870 H. Johnson & Sons
,,	100	573 J. R. Francis & Co.
,,	100	562 A. E. Piggott
,,	25	150 Union L. Co., Ld.
,,	250	1,414 W. Grose & Co.
,,	100	600 C. Southwell & Co.
,,	364	870 L. & I. D. Jt. Co.
Holland,	110	160 J. Barber & Co.
France,	200	200 Trier, Meyer & Co.
Canada,	500	500 Barrett Tagant & Co.
,,	500	500 Bellamy's Wf.
,,	100	100 R. G. Hall & Co.

Glue—

Holland,	£26	T. H. Lee
France,	52	J. Harrison
,,	36	Prop. Hay's Wf.
U. States,	90	Armour & Co.
Germany,	155	J. Harrison
,,	42	Phillipps & Graves
,,	160	E. Olyett & Sons
Russia,	280	M. H. Voss
Holland,	150	W. J. Davies & Sons
France,	248	Vokins & Co.
Germany,	40	Sander & Knott
France,	16	Bennett S. S. Co.

Glue Stock—

Germany,	47 pks.	Butler's Wf., Ld.
U. States,	56	F. W. Warmington & Co.
Germany,	29 bls.	Hicks, Nash, & Co.
Straits,	195 bkts.	Anning & Cobb
U. States,	200 bls.	,,

E. Indies, 90 Hore & Scrivener
Manganese—
Germany, 5 t. R. Ulrich
Manganese Ore—
Jaffa, 25 t. Elkan & Co.
Manure—
Belgium, 4 t. T. Ronaldson & Co.
Germany, 49 Humphery & Co.
E. Indies, 142 A. Hunter & Co.
N. Russia, 70 Lawes Chemical Manure Co.
E. Indies, 205 H. Grey, jr.
Methyl Alcohol—
France, 10 dms. Lister & Biggs
Molasses—
Germany, 359 brls. 1,840 c. J. R. Francis & Co.
U. States, 200 1,105 Seaward Brs., Ld.
Ochre—
Holland, 2 pks. Phillipps & Graves
" 3 cs. "
France, 43 pks. Burrell & Co.
" 1 J. Flack
" 240 W. Harrison & Co
" 20 Fellows, Morton, & Co
Spain, 39 Brasch & Rothenstein
France, 30 cks. Ellam, Jones, & Co
" 10 Vokins & Co.
Paraffin Scale—
U. States, 225 brls. Lon. & Til. Ltge. C. & D. Co.
" 90 Williams, Torrey, & Co.
" 461 Anglo-American Oil Co., Ld.
Paraffin Wax—
U. States, 150 brls. Lon. & Til. Ltge. C. & D. Co.
Canada, 412 H. Hill & Sons
U. States, 100 "
" 100 G. H. Frank
Rangoon, 600 H. Hill & Sons
Pearl Ash—
France, 230 c. F. W. Berk & Co., Ld.
Phosphate Rock—
Belgium, 210 t. D. de Pass & Co.
" 335 Anglo-Contl. Guano Works
France, 20 W. H. Carey & Sons
Pitch—
N. Russia, 47 brls. J. W. Cook & Co.
Germany, 64 H. Hunt
W. Indies, 122 bgs. Gillespie Brs. & Co.
Germany, 52 cks. Poth Hille & Co.
Plumbago—
Germany, 12 cks. H. Lambert
U. States, 7 cs. Lunham & Moore
" 41 kgs. "
Belgium, 113 J. Thredder, Son, & Co
Ceylon, 70 Doulton & Co.
" 368 Marshall & French
Potassium Carbonate—
France, 90 c. J. A. Reid
" 100 W. E. Cole
Germany, 45 Petri Brs.
Potassium Meta Bisulphite—
Germany, 1 ck. Burgoyne & Co.
Potassium Oxalate—
Norway, 15 kgs. S C. D. Co.
Potassium Sulphate—
Germany, 200 bgs. F. W. Berk & Co., Ld
Pumice Stone—
Italy, 2 t. Tudor, Nash, & Co.
Pyrites—
Pomaron, 999 t. Mason & Barry, Ld.
Portugal, 1,250 "
Spain, 1,976 C. Tennant, Sons, & Co.
" 405 Anderson, Anderson, & Co.
Saltpetre—
E. Indies, 1,019 bgs. Lucas & Spencer's Wf.
" 1,248 H. Grey, jr.
Germany, 175 P. Hecker & Co.
Soap—
U. States, £250 H. A. Lane & Co.
Sodium—
Holland, 5 cs. Gas Light & Coke Co.
Sodium Acetate—
Germany, 6 cks. F. Bochin
France, 12 Lister & Biggs
Sodium Hyposulphite—
Holland, 240 c. R. W. Greeff & Co.
Sodium Phosphate—
Belgium, 107 c. A. Boak, Roberts, & Co.
" 54 C. Lamb & Co.
Starch—
France, 40 pks. J. Barber & Co.
" 475 E. & T. Pink
Belgium, 206 T. H. Lee
" 175 400 cs. E. & T. Pink
Holland, 80 40 Hernu, Peron, & Co
" 1,541 1,572 Little & Johnston
U. States, 1,000 bgs. J. Forsey
Belgium, 106 pks. Leach & Co.
Germany, 41 Phillipps & Graves
Belgium, 100 T. Ronaldson & Co.
Holland, 60 cs. "
Belgium, 200 J. Barber & Co.
Canada, 300 R. G. Hall & Co.
France, 20 W. E. Cole
" 40 J. Harrison
Germany, 1,050 Horne & Co.
U. States, 300 sks. R. Bennett & Co.
Stearine—
Belgium, 188 bgs. H. Hill & Sons
Melbourne, 100 "
France, 20 cks. Beresford & Co.
U. States, 57 L. & I. D. Jt. Co.
Sulphur—
Italy, 10 t. A. F. White & Co.
" 500 Fuerst Brs.
Talc—
France, £52 Brasch & Rothenstein
E. Indies, 2,670 W. M. Smith & Sons
" 95 A. E. Piggott
Canada, 15 H. Ewald & Co.
Tallow—
N. Zealand, 360 cks. J. W. Cook & Co.
" 150 Phillipps & Graves
Belgium, 7 T. Ronaldson & Co.
U. States, 3 kgs. Lunham & Moore
N. Zealand, 3 cks. Aust Meat. Co.
" 146 N. Z. L. & M. A. Co.
Queensl'd, 238 Beresford & Co.
N. Zealand, 696 Col. Consign Co.
" 93 J. W. Cook & Co.
" 138 Goad, Rigg. & Co.
U. States, 150 tcs Phillipps & Graves
" 240 Lucas & Spencer's Wf.
Holland, 5 brls. Phillipps & Graves
Queensland, 27 cks. "
N. Zealand, 75 Flack, Chandler, & Co.
" 18 Brown & Elmslie
" 113 Culverwell, Brooks, & Co.
" 91 J. Greig
N S. Wales, 30 Aust. Meat Co.
Melbourne, 22 H. Hill & Sons
" 44 Goad, Rigg, & Co.
" 1,200 A. B. Curtis & Co.
" 42 pks. Hicks, Nash & Co.
" 126 Sawer, Sons. & Co.
China, 3 Brown & Elmslie
Channel Is., 11 cks. Goad, Rigg, & Co.
Melbourne, 50 Goldsborough, Mort & Co.
U. States, 200 tcs. C. S. Lovell
Tartar Emetic—
Germany, £20 R. W. Greeff & Co
Tartaric Acid—
Holland, 48 pks. B. & F. Wf Co.
Belgium, 13 F. C. Devon & Co.
" 6 R. W. Greeff & Co.
Ultramarine—
Belgium, 20 pks. J. Harrison
Varnish—
Belgium, 2 pks. Wilson & Co.
France, 2 Girard Brs & Co.
U. States, 42 Lunham & Moore
Germany, 13 L. & N.-W. Rly. Co.
White Lead—
Holland, 96 pks. T. & W. Farmiloe, Ld.
France, 16 J. Watt & Son
Belgium, 16 J. L. Lyon & Co.
" 47 T. & W. Farmiloe, Ld.
Germany, 22 A. Zumbeck & Co.
" 63 F. G. Clifford
Holland, 29 Burrell & Co.
" 19 J. L. Lyon & Co.
" 25 cks. Wilkinson, Heywood & Co.
" 4 H. Johnson & Sons
Wolfram Ore—
Chili, 3 t. H. Bath & Son
Wood Pulp—
Holland, 120 bls. H. Johnson & Sons
Sweden, 320 Alsing & Co., Ld
Norway, 160 pks. Becker & Co.
Swede.s, 160 W. G. Taylor & Co.
U. States, 52 Johnsen & Jorgensen
Germany, 400 T. H. Lee
Canada, 1,800 G Becker & Co.
Sweden, 228 Christophersen, Andrews, & Co.
Zinc Oxide—
Holland, 113 pks. M. Ashby, Ld.
" 50 cks. J. Matton
" 50 Burrell & Co.
Germany, 500 Soundy & Sons

LIVERPOOL.

Week ending July 14th.

Acids—
Hamburg, 1 brl.
Antimony—
Valparaiso, 261 bgs. A. Aramayo & Co.
Antimony Ore—
Mollendo, 123 bgs. Kleinwort, Sons & Co.
Asbestos—
Genoa, 20 pks.
Old Calabar, 1 cs. Asbestos Co.
Barytes—
Rotterdam 54 cks.
Bone Ash—
B. Ayres, 1,260 bgs. W. B. Dickinson
" 400
Bones—
Boston, 25 brls.
Borax—
Valparaiso, 800 sks.
Caoutchouc—
Mollendo, 8 bls.
Castor Oil—
Calcutta, 1,314 cs. Ralli Brs.
" 316
Chemicals *(otherwise undescribed)*
Boston, 103 pks. J. Cassels & Co.
Colours—
Hamburg, 5 cks. 2 cs.
Rotterdam, 62 nbs.
Cream of Tartar—
Bordeaux, 57 cks
Dyestuffs—
Aniline Chlorhydrate
Barcelona, 5 brls.
Cutch
Rangoon, 500 bxs.
Singapore, 2,351 bxs.
Extracts
Fiume, 307 brls.
Bordeaux, 66 cks.
Nantes, 750
Halifax, 100
Shumac
Palermo, 1,000 bgs.
Dyestuffs *(otherwise undes.)*—
Mollendo, 217 bgs.
Baltimore, 247
Glycerine—
Barcelona, 300 dms.
Iodine—
Valparaiso, 79 kgs. A. Gibbs & Co.
Lithopone—
Rotterdam, 60 cks.
Molasses—
N. Orleans, 5,712 brls.
Paint—
Boston, 14 cs. Bahr, Behrend & Ross
" 10 Leech & Co.
New York, 20 brls. Anglo-Am. Oil Co., Ld.
Pyrites—
Huelva, 10,189 t. Matheson & Co.
" 1 134 H. Bath & Son
Rosin—
New York, 201 brls.
Wilmington, 172 Capt. Ostensen
" 3,867
Salt—
Hamburg, 500 bgs.
Saltpetre—
Hamburg, 2 cks 20 kgs.
Silver Sulphide—
Vera Cruz, 10 cs. Elliot's Metal Co.
Soap—
Boston, 5 cs. Evans, Sons & Co.
N'port News, 800 brls.
N. Orleans, 1,656
Soapstone—
Bordeaux, 10 bgs. Geo. G. Blackwell, Sons & Co.
Sodium Nitrate—
Junin, 7,433 bgs.
Starch—
Boston, 10 brls. J. Braithwaite
Rotterdam, 60 cs.
Newport News, 600 bgs.
Baltimore, 1,020
Tallow—
New York, 410 tcs. 50 hds.
Boston, 100 G. W. Rowley
" 450
B. Ayres, 1 474 cks. 619 hf.-pps. 767 pp's.
" 150 H. Brown
Baltimore, 15 tcs.
Tar—
Wilmington, 1,500 brls.
Tartaric Acid—
Rotterdam. 10 cks.
Turpentine—
Wilmington, 406 brls.
Varnish—
New York, 20 brls.
Rotterdam, 3 cks.
Waste Salt—
Hamburg, 1 brl. 152 bgs.
Wood Pulp—
Montreal, 2,975 bls. A. Rice & Co.
Halifax, 30 brls.
Zinc Oxide—
New York, 100 brls.

MANCHESTER.

Week ending July 16th.

Acetate of Lime—
Treport, 287 bgs.
Acetic Acid—
Rotterdam, 10 brls.
Albumen—
Riga, 20 cs. W. H. Ingram
Ammonia—
Rotterdam, 43 cyldrs.
Ammonium Chloride—
Antwerp, 5 cs. J. T. Fletcher & Co.
Ammonium Sulphate—
Bordeaux, 11 cks. J. & P. Hutchison
Aniline Salts—
Rotterdam, 12 cks.
Antimony—
Treport, 2 cks.
Antimony Salts—
Hamburg, 4 cks.
Rotterdam, 6
Barytes—
Antwerp, 190 bgs.
Hamburg, 33 cks.
Rotterdam 23
Carbonic Sulphide—
Sarpsborg, 3 dms.
Cement—
Antwerp, 1,440 bgs. 24 cks.
Ceresin Wax—
Hamburg, 15 cs.
Colours—
Antwerp, 22 pks.
Hamburg, 1 cs.
Cream of Tartar—
Rotterdam, 20 kgs.
Caustic Soda—
Hamburg, 40 cks.
Dextrine—
Hamburg, 10 bgs. 3 cs.
Dyestuffs—
Alizarine
Rotterdam, 40 cks.
Extracts
New York, 40 brls.
Rotterdam, 10 cks.
Indigo
Rotterdam, 11 cks.
Farina—
Hamburg, 100 bgs.
Rotterdam, 1,000
Glucose—
New York, 10 brls.
Glue—
Rotterdam, 100 bgs. 2 cs.
Treport, 7 cks.
Limestone—
Antwerp, 6 crts.
Magnesium Sulphate—
Sarpsborg, 1 brl.
Mineral White—
Bordeaux, 200 bgs.
Oxalic Acid—
Rotterdam, 15 cks.
Paraffin Scale—
New York, 495 brls.

Phosphates—
Antwerp, 16 cks.
Potash—
Hamburg, 20 dms.
Potassium Prussiate—
Bordeaux, 24 cks. J. & P. Hutchison
Rosin—
New York, 750 brls.
Size—
Rotterdam, 11 cs.
Soap—
Rotterdam, 2 cs.
Soda—
New York, 11 cks.
Treport, 40 bgs.
Sodium Chlorate—
Gothenburg, 4 cks.
Starch—
Antwerp, 822 cs.
Hamburg, 160
New York, 200 bgs.
Sulphuric Acid—
Rotterdam, 21 cks.
Tallow—
New York, 50 hds.
Tannic Acid—
Hamburg, 3 cks.
Tartaric Acid—
Bordeaux, 4 cks. J. & P. Hutchison
Rotterdam, 8
Ultramarine—
Hamburg, 20 cks
Waste Salt—
Hamburg, qty.
Wood Pulp—
Christiania, 3,676 blls. W. H. Ingram
Drammen, 50 28 cs. ,,
Gothenburg, 1,890
Halifax, 8,090 pks.
Hamburg, 240
Montreal, 195
New York, 49
Quebec, 180
Rotterdam, 100
Sarpsborg, 2,198 Kellner, Partington Co.
Skien. 600 W. H. Ingram
Zinc Oxide—
New York, 100 brls.

HULL.

Week ending July 16th.

Acids—
Bari, 66 cks. Wilson, Sons, & Co., Ld.
Albumen—
Riga, 1 ck.
Antimony Salt—
Bremen, 5 cks. Veltmann & Co.
Barytes—
Antwerp, 68 cks. Bailey & Leetham, Ld.
100 bgs.
,, 200 H. F. Pudsey
,, 127 cks.
,, 176 Wilson, Sons, & Co. Ld.
Bremen, 67
New York, 4 bxs. ,,
Bone Meal—
Antwerp, 10 cs. Wilson, Sons, & Co., Ld.
Castor Oil—
Venice, 20 cs Wilson, Sons, & Co., Ld
Chemicals *(otherwise unaescribed)*
Antwerp, 88 pks. Wilson, Sons & Co., Ld.
Rotterdam, 3 cs. Hutchinson & Son
Colours—
Antwerp, 9 pks Wilson, Sons, & Co., Ld.
Bremen, 1 cs. J. Pyefinch & Co.
Rotterdam, 42 cks. W. & C. L. Ringrose
54 pks.
3 cs.
,, 6 brls. Hutchinson & Son
145 pks.
6 cks.
Cream of Tartar—
Rotterdam, 4 cks. W. & C. L. Ringrose
Cryolite—
Copenhagen, 2 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 107 pks. Hutchinson & Son
Indigo
Rotterdam, 2 cks. Hutchinson & Son
6 cbts.
Madder
Rotterdam, 3 cks. Hutchinson & Son
Myrabolams
Bombay, 1,255 bgs.
Shumac
Palermo, 645 bgs.
Trieste, 157 bls. Wilson, Sons, & Co., Ld.
Valonia
Trieste, 218 bgs. Wilson Sons, & Co., Ld.
Farina—
Harlingen, 350 bgs. W. & C. L. Ringrose
,, 400 pks. Hutchinson & Son
Stettin, 100 bgs. Wilson, Sons, & Co., Ld
Glucose—
Rotterdam, 40 bgs. Hutchinson & Son
Stettin, 150 Wilson, Sons, & Co., Ld.
Glue—
Hamburg, 100 bgs. Bailey & Leetham, Ld
Rotterdam, 4 bls. W. & C. L. Ringrose
Rouen, 8 cks. Rawson & Robinson
Nickel Salt—
Rotterdam, 1 ck. W. & C. L. Ringrose
Ochre—
Rouen, 44 cks. Rawson & Robinson
Paint—
Copenhagen, 1 brl. Wilson, Sons. & Co., Ld.
Trieste, 6 dms. ,,
Paraffin Wax—
New York, 550 pks.
Phosphates—
Ghent, 160 t.
Pitch—
Copenhagen, 50 brls. Wilson, Sons, & Co., Ld.
Potash—
Bremen, 1 ck. Veltmann & Co.
Pumice Stone—
Messina, 545 pks. Wilson, Sons, & Co., Ld.
,, 38
Pyrites—
Huelva, 831 t.
Soap—
Bari, 3 cs.
New York, 1,000 bxs.
Soda—
Ghent, 400 bgs. Wilson, Sons, & Co., Ld.
Starch—
Bremen, 817 cs. Veltmann & Co.
Ghent, 364 Wilson, Sons, & Co., Ld.
Stearine—
Antwerp, 3 bgs. Bailey & Leetham, Ld.
,, 5 Wilson, Sons, & Co., Ld.
Sulphur—
Catania, 800 pks. Wilson, Sons, & Co., Ld.
,, 484
Tallow—
New York, 25 tcs. Wilson,
75 cks. Sons, & Co., Ld.
Tar—
Copenhagen, 1 ck. Wilson, Sons, & Co., Ld.
Konigsberg, 40 brls. ,,
,, 110
Tartaric Acid—
Rotterdam, 9 cks. W. & C. L. Ringrose
Turpentine—
Antwerp, 100 brls. Wilson, Sons, & Co., Ld.
,, 50
White Lead—
Antwerp, 22 cks. Bailey & Leetham, Ld.
Rotterdam, 41 Hutchinson & Son
,, 103 W. & C. L. Ringrose
Wood Pulp—
Antwerp, 25 bls. Bailey & Leetham Ld.
Christiania, 2,560 Wilson, Sons, & Co., Ld.
Gothenburg, 32 ,,
Rotterdam, 5 pks. Hutchinson & Son
Zinc Dust—
Antwerp, 6 cks Bailey & Leetham, Ld.
Zinc White—
Antwerp, 50 cks. Bailey & Leetham, Ld.
Rotterdam, 20 Hutchinson & Son
,, 25 W. & C. L. Ringrose

GLASGOW.

Week ending July 21st.

Acetic Acid—
Rotterdam, 8 cks. J. Rankine & Son
Alumina Sulphate—
Rotterdam, 160 bgs.
Barium Chloride—
Rotterdam, 3 cks. J. Rankine & Son
Barium Sulphate—
Antwerp, 300 bgs.
Barytes—
Rotterdam, 45 cks. J. Rankine
54 pks & Son
Calcium Carbonate—
Rouen, 25 cks.
Chemicals *(otherwise undescribed)*
Rotterdam 5 cs. J. Rankine & Son
Colours—
Rouen, 2 cks.
Hamburg, 13 cs. 20 dms.
Rotterdam, 158 pks. J. Rankine & Son
Cream of Tartar—
Barcelona, 23 cks.
Dyestuffs—
Alizarine
Rotterdam, 38 cks. J. Rankine & Son
Aniline
Rotterdam, 14 cks. J. Rankine
9 cs. & Son
Aniline Colours
Amsterdam, 1 ck.
Cutch
Rangoon, 215 cs.
Madder
Rotterdam, 6 cks. J. Rankine & Son
Felspar—
Christiania, 133 bgs.
Glue—
Rouen, 63 cks. 10 brls.
Hamburg, 160 bgs.
Ochre—
Rotterdam, 26 cks. J. Rankine & Son
Rouen, 137
Painters' Colours—
Antwerp, 1 ck.
Paraffin Wax—
Rangoon, 240 cs.
Saltpetre—
Hamburg, 14 cks.
Soap—
Newport News, 110 brls.
Rouen. 40 cs.
Rotterdam, 3 J. Rankine & Son
Soda—
Hamburg, 40 cks.
Sodium Acetate—
Rouen, 10 cks.
Starch—
N'port News, 250 sks.
Rotterdam, 40 cs. J. Rankine & Son
Antwerp, 190
Sulphur Ore—
Seville, 960 t.
Tallow—
Rotterdam, 10 tcs. J. Rankine & Son
Tartar—
Bordeaux, 8 cks.
White Lead—
Rotterdam, 49 pks. J. Rankine & Son
Wood Pulp—
Christiania, 934 blls.
Gefle, 1,600 W. G. Taylor & Co
,, 2,453 Henderson, Craig & Co.
Rotterdam, 25 J. Rankine & Son
Zinc Oxide—
Rotterdam, 25 cks. J. Rankine & Son
Antwerp, 20

TYNE.

Week ending July 16th.

Alum Earth—
Hamburg, 137 cks. Tyne S. S. Co.
Barytes—
Antwerp, 350 bgs. Tyne S. S. Co.
Rotterdam. 12 cks. ,,
Castor Oil—
Antwerp, 28 brls. Tyne S. S. Co.
Colours—
Antwerp, 3 cks. Tyne S. S. Co.
Glue—
Hamburg, 1 cs. Tyne S. S. Co.
Limestone—
Antwerp, 12 crts. Tyne S. S. Co.
Phosphates—
Antwerp, 345 t. Langdale's Chemical M. Co.
Soap—
Rotterdam, 3 cs. Tyne S. S. Co.
Starch—
Rotterdam, 160 cs. Tyne S. S. Co.
Ultramarine—
Antwerp, 4 brls.
White Lead—
Antwerp, 21 cks. Tyne S. S. Co.
Wood Pulp—
Rotterdam, 52 bls. Tyne S. S. Co.

GOOLE.

Week ending July 13th.

Acetic Acid—
Antwerp, 2 cks. 80 crbys.
Alizarine—
Rotterdam, 49 brls.
Alumina Sulphate—
Rotterdam, 13 cks.
Antimony—
Boulogne, 13 cks.
Barytes—
Antwerp, 110 bgs.
Caoutchouc—
Boulogne, 4 cks.
Dyestuffs *(otherwise unaescribed)*
Antwerp, 32 bgs
Boulogne, 89 cks. 4 cs. 186 pks.
Rotterdam, 477 95
Farina—
Hamburg, 200 bgs.
Glue—
Boulogne, 4 bls.
Ochre—
Dunkirk, 97 cks.
Plumbago—
Boulogne, 2 cs.
Potash—
Antwerp, 3 cks.
Dunkirk, 44 16 dms.
Saltpetre—
Rotterdam, 200 bgs.
Starch—
Antwerp, 150 cs.
Ghent, 30 bxs.
Varnish—
Amsterdam, 6 cs.
Waste Salt—
Hamburg. 440 t.
500 bgs.
Wood Pulp—
Hamburg, 200 pks.

GRIMSBY.

Week ending July 16th.

Barytes—
Rotterdam, 100 bgs.
Chemicals *(otherwise undescribed)*
Antwerp, 36 pks.
5 cks. 6 cs. 31 crbys.
Hamburg, 2

Rotterdam, 18

Colours—
Antwerp, 6 cks. 80 pks.
Hamburg, 33 7 cs. 18
Rotterdam, 9

Extracts—
Antwerp, 37 cks.
Dieppe, 25

Glue—
Antwerp, 2 cks.

Dieppe, 40 bgs.

Lamp Black—
Helsingborg, 65 cks.

Size—
Rotterdam, 4 cs.

Starch—
Antwerp, 278 cs.

Wood Pulp—
Christiania, 650 t.

Zinc Ashes—
Antwerp, 9 cks.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 20th.

Acids—
Bahia, 6 pks. £17
Hamburg, 4 cs. 13
Delagoa Bay, 6 37
Larnaca, 6 37

Alkali—
Lyttelton, 7 t. 12 c. £35

Ammonia—
Cologne, 40 dms. £311
B. Ayres, 12 cs. 14

Anhydrous Ammonia—
Cologne, 20 cyldrs. £55
Antwerp, 50 175

Ammonium Carbonate—
Paris, 3 t. 4 c. £89
Sydney, 15 cs. 22

Ammonium Chloride—
Trebizonde, 2 t. £54
Melbourne, 1 2 c. 22
Genoa, 1 20
Cologne, 1 8 20 cks. 140

Ammonium Nitrate—
New York, 10 cks. £49

Ammonium Sulphate—
Christchurch, 5 t. 6 c. £53
Barbadoes, 200 1 1 924
Dunkirk, 110 1,013
Cologne, 10 90
Sourabaya, 1,062 15 9 754
Samarang, 101 11 1,110

Arsenic—
Amsterdam, 15 cks. £58
Montreal, 1 t. 28

Bisulphite of Lime—
Bombay, 1 t. 5 c. £18

Bleaching Powder—
Hong Kong, 3 c. £5

Borax—
Rotterdam, 50 cks. £75
Melbourne, 50 kgs. 35

Carbonic Acid Gas—
Channel Is., 85 tubes £22

Caustic Soda—
Pt. Elizabeth, 2 t. 5 c. £53
Philadelphia, 151 500
Lyttelton, 6 12 50
Sydney, 13 10
Shanghai, 3 5
Alexandria, 2 25
Otago, 1 5 22
Fremantle, 8 22

Chemicals *(otherwise undescribed)*
Calcutta, 11 cs. £37
Amsterdam, 6 kgs. 36
Hamburg, 12 cks. 25 165
Singapore, 40 pks. 28
Adelaide, 27 17
Boulogne, 1 10
Rangoon, 20 cs. 17
Antwerp, 10 40 dms. 172
Dunkirk, 30 425
Dusseldorf, 2 56
Barbadoes, 12 5
E. London, 17 20 pks. 83
Rotterdam, 3 kgs. 18
Ostend, 2 10
Cologne, 61 121
Montreal, 16 dms. 26
Norrkoping, 10 16
Paris. 5 14
Sydney, 14 cs. 140
Bombay, 44 141
Durban, 30 111

Citric Acid—
Dunedin, 2 kgs. £13
Brussels, 15 10 c. 141
Rio de Janeiro, 1 6
Hiogo, 10 58
Odessa, 28 164
Cape Town, 1 ck. 7
Santander, 11 58
Bombay, 1 6
Melbourne, 15 89
Fremantle, 2 13
Sydney, 2 kgs. 13
Libau, 1 7
Christchurch, 3 cs. 22
Adelaide, 1 8
Amsterdam, 4 24
Genoa, 10 64

Coal Products—
Alizarine
Lisbon, 2 cks. £30
Boston, 25 298
Aniline
Melbourne, 7 cs. £116
Dunedin, 2 61
New York, 29 dms. 730
Anthracene
Cologne, 261 cks. £1,330
Rotterdam, 310 898
Benzine
Wellington, 10 dms. £8
Benzol
Hamburg, 49 cks. £106
Treport, 30 124
Boulogne, 50 170
Carbolic Acid
Sydney, 7 cs. 20 dms. £36
Riga, 24 cks 133
Melbourne, 40 15
Creosote
New York, 1,053 cks. £781
Naphtha
Wellington, 20 dms. £10
Sydney, 50 cs. 21
Naphthaline
New York, 83 cks. £73
Hamburg, 35 100 bgs. 139
Paris, 17 84 80
Nitro Naphthaline
Rouen, 1 ck. £12
Pitch
Hochfeld, 260 t. £355
Antwerp, 2,441 2,481
Delagoa Bay, 8 cs. 4
Hamburg, 150 cks. 285
Alexandria, 50 200 brls. 81
Sydney, 20 7
Fremantle, 40 kgs. —
Philadelphia, 450 191
St. Petersburg, 1,001 bgs. 150
Boston, 100 60
Newport News, 150 35
Prussian Blue
Genoa, 3 cks. £38
Pyridine
Antwerp, 10 cks. £107
Tar
Pt. Elizabeth, 750 dms. £28
Delagoa Bay, 100 11
Durban 200 23
Fremantle, 95 —
Wellington, 20 5
St. Petersburg, 7,625 brls. 1,509
Cologne, 200 cks. 121
Tar Oil
Hamburg, 5 cks. £5

Copper Sulphate—
Treport, 5 t. 1 c. £77
Brisbane, 1 15
Delagoa Bay, 4 5
Boulogne, 5 75
Canterbury, 1 17
Odessa, 7 110
Shanghai, 5 5
Bordeaux, 8 10 140
Libau, 11 9
Brussels, 5 83
Ghent, 5 83

Cream of Tartar—
Melbourne, 2 t. 10 c. £464
Adelaide. 1 71
Launceston. 1 73
Pt. Elizabeth, 4 18
Lyttelton, 5 18
Wellington, 3 11
Dunedin, 1 10 109
Fremantle, 5 20

Disinfectants—
Madras, 30 dms. £11
Sourabaya, 12 pks. 34
Hong Kong, 6 12
Chinde, 56 18
Brisbane, 18 cs. 65
Bombay, 336 292
Karachi, 128 39
Hamburg, 24 19
Paris, 10 cks. 42
Adelaide, 4 10
Delagoa Bay, 12 22
Sydney, 19 58
Melbourne, 2 16
Otago, 20 42

Glycerine—
Rotterdam, 10 t. 2 c. £400
New York, 34 18 980

Manure—
Treport, 9 t. 4 c. £36
Lyttelton, 178 1,360
Memel, 780 1,820
Trinidad, 400 3,400
Barbadoes, 16 156
Landerdeau, 200 1,720
Demerara, 150 1,350
Antwerp, 9 10 90
Wellington, 25 10 68
Riga, 101 4 225
Durban, 9 3 153

Phosphates—
New York, 1 t. 1 c. £35
St. Kitts, 32 77

Potash—
M. Video 2 t. 3 c. £40
Hamburg, 4 160
Shanghai, 3 7
Brussels, 4 32

Potassium Bichromate—
Bremen, 1 t. 3 c. £35
Hamburg, 2 4 68
Antwerp, 1 1 33

Potassium Chlorate—
E London, 1 t. 5 c. £41
Wellington, 1 8 45
B. Ayres, 1 36
Otago, 6 kgs. 9

Potassium Cyanide—
Townsville, 2 t. £224
Fremantle, 7 12 c. 940
New York. 300 cs. 1,456
Delagoa Bay, 9 30 1,211
Durban, 20 206
Sydney, 15 200

Saltpetre—
Bahia, 8 t. 6 c. £168
Melbourne. 2 40
Newport News, 27 10 505
Sydney. 1 23

Sheep Dip—
New York, 12 cks. 2 t. 4 c. £41
B. Ayres, 2,230 cs. 5,064
Sydney, 500 875
Durban, 1,025 dms. 3 219
Christchurch, 25 125 50 278
San Francisco, 100 150

Soda—
Gibraltar, 2 t. 11 c. £18
Rotterdam, 5 9 30
Shanghai, 3 15 16
Alexandria, 1 10 8

Soda Crystals—
Pt. Elizabeth, 4 t. £14
Shanghai, 2 6 c. 7
Sydney, 2 15 9

Sodium Bicarbonate—
Pt. Elizabeth, 10 c. £7

Sodium Hyposulphite—
Adelaide, 42 t. 14 c. £181

Sodium Nitrate—
Barbadoes, 12 t. 10 c. £97

Sodium Prussiate—
Hamburg, 5 t. 2 c. £237

Sodium Silicate—
Christchurch, 4 t. 3 c. £18

Sodium Sulphate—
Ghent, 70 t. £105

Sulphur—
Adelaide, 99 bgs. £29

Sulphuric Acid—
Demerara 4 t. 8 c. £29
Pt. Elizabeth, 17 10
Aden, 31 cs. 34
E. London 25 18

Superphosphates—
Pt. Chalmers, 50 t. £150
Bluff, 150 375

Tartaric Acid—
Brisbane, 2 c. £12
Adelaide, 10 58
Lyttelton, 8 47
Madras, 2 12
Antwerp, 1 t. 7 164
Fremantle, 3 18

LIVERPOOL.

Week ending July 20th.

Acetate of Lime—
Rio de Janeiro, 1 t. £16

Acetic Acid—
Copenhagen, 14 c. £14

Alkali—
Progresso, 3 t. 5 c. £25
Mexico, 10 10 3 q. 47
Valencia, 45 8 3 202
Sydney, 8 17 2 36
Melbourne, 25 2 175
Odessa, 15 13 2 63
Smyrna, 4 15 2 20
Sfax, 4 4 1 17
Sourabaya, 1 6
Piræus, 13 4 3 53
Philadelphia, 1 8 1 9
M. Video, 2 2 8
La Guayra, 6 6 3 26
Barcelona, 7 13 2 30
Lisbon, 46 8 2 217
Genoa, 50 225

Alum—
Bombay, 6 t. 15 c. £53
Alexandria, 7 5 2 q. 36
Syra, 3 3 14
Rio de Janeiro, 1 1 3 8
Lisbon, 17 cks. 20
Pimental, 19 3 5

Aluminous Cake—
Montreal, 1 t. 12 c. 3 q. £8
Melbourne, 5 19 2 18

Ammonium Carbonate—
Copenhagen, 3 t. 2 c. £70
Rouen, 1 25
Genoa, 2 12 70
Naples, 4 5
Rangoon, 11 1 q 17
B Ayres, 1 1 2 39
Lisbon, 15 23

Ammonium Chloride—
Barcelona, 1 t. 1 c. £20
Genoa, 3 1 54
New York, 12 220
Philadelphia, 19 8 2 q. 340
Salaora, 4 7
Ibrail, 6 9

Ammonium Sulphate—
Odessa, 299 t. £2,927
Barbadoes, 50 5 c. 471
Las Palmas, 35 346
Philadelphia, 127 10 1,215
Gd. Canary, 14 143
Honolulu, 25 230
Malaga, 5 47
Demerara, 49 17 3 q. 498
Valencia, 8 19 2 70

Antimony—
Bombay, 17 c. £36

Antimony Salts—
Vera Cruz, 5 c. £14

Barium Carbonate—
Bombay, 2 t. £15

Basic slag—
Bordeaux, 126 t. £189

Bleaching Powder—
Baltimore, 100 cks.
Barcelona, 17
Boston 258
Calcutta, 176 cs.
Callao, 20 kgs.
E. London, 20 dms.
Everitt, 83
Genoa, 129
Gothenburg, 29
Lisbon, 80
Melbourne, 35
Montreal, 8

Nantes, 15
Naples, 42
New York, 578 20 brls. 55 bxs.
Oporto, 15 34
Rotterdam, 40
Rouen, 24
Santos, 8
Sydney, 20
Tampico, 9
Venice, 28

Borax—
Brisbane, 2 t. £40
Montreal, 13 4 c. 3 q. 195
Hamburg, 25 6 2 354
Galatz, 1 14
Rotterdam, 11 151
Constantinople, 16 18
Stockholm, 10 8 154
Oporto, 1 2 1 12
Natal, 17 3 14
Ibrail, 9 6
Genoa, 5 10 69

Calcium Chloride—
Odessa, 10 t. 3 c. £21
New York, 10 2 22
Sydney, 20 1 45

Carbolic Acid—
Alexandria, 4 brls. £9
Rouen, 14 t. 2 c. 433
Hamburg, 8 2 2 q. 516
New York, 8 cs. 129
Colombo. 15

Caustic Potash—
New York, 1 t. 11 c. £39

Caustic Soda—
Acajutla, 30 dms.
Alexandria, 180
Amsterdam, 221
Bahia. 30
Barcelona, 120 68 pks. 24 cks.
Bilbao, 124 11
Bombay, 50
Boston, 200 50 brls
Bourgas, 30
Catania, 35
Cavalla, 6
Fairwater, 138
Fiume, 20
Gefle, 14
Genoa, 494
Gutujewski, 150
Hamburg, 74
Hiogo, 259
Ibrail 18
Johannesburg, 40
Kingston, 10 cs.
Launceston, 6
Liban, 60
Melbourne, 116
Messina, 10
M. Video, 100
Nantes, 30
Naples, 102
Newcastle, 56
New York, 375 45 bxs. 20
Pasages, 10 5 cks.
Penang, 15
Pimental, 16
Pt. Natal, 200
Riga, 35
Rotterdam, 45
Sfax, 15
Samarang. 62
San Sebastian, 30
Salaverry, 1
Stettin, 3
Sydney, 5
Talcahuano, 100
Tampico, 112
Vera Cruz, 115

Chemicals *(otherwise undescribed)*
Braila, 3 brls. £16
Marseilles, 6 29
Genoa, 9 cks. 73
Kobe, 1 t. 5 c. 35
Yokohama, 3 10 88
M. Video, 21 3 58
Odessa, 6 9 157
Melbourne, 5 cs. 7
Madras, 2 2 q. 10
Hamburg, 8 10
Copenhagen, 6 24
Philadelphia, 20 3 511

China Clay—
Baltimore, 200 cks.
Barcelona, 600 bgs.
Bombay, 130
Boston, 834
Calcutta, 200
Madras, 80
Montreal, 6
Newport News, 200
New York. 50
Philadelphia, 600
Rio de Janeiro, 120
Tocino, 40

Citric Acid—
Montreal, 2 c. 3 q. £12

Coal Products—
Aniline Oil
Barcelona, 7 dms.
Genoa, 10
Aniline Salts
Athens, 5 brls.
Piræus, 10
Boston, 1 bx. 82 cs. 7 kgs.
Tampico, 4 cks.
Creosote Oil
Bordeaux, 100 cks.
Pitch
Hamburg, 45 cks.
New York, 10
Tar
Callao, 30 brls.
Lagos, 10
Pt. Natal, 70 dms.

Copperas –
Haifa, 2 t. 9 c. £5
Beyrout, 2 10 5

Copper Sulphate—
Rouen. 19 t. 18 c. 1 q. £315
Copenhagen, 1 12 1 30
Tampico, 19 2 16
Melbourne, 5 79
Bombay, 2 10 40
Samarang, 5 17 3 93
Odessa, 3 1 52
Bordeaux, 64 7 1 1,017
Penang 1 10 24
Guayaquil, 2 2
Antwerp, 15 5 2 948
M. Video. 6 1 94
Amsterdam, 4 8 1 72
Stettin, 3 15 3 62
Danzig, 2 10 3 42
Madras, 1 16
Ghent, 2 5 2 38
Braila, 6 104
Galatz, 8 6 1 142
Nantes, 5 2 2 82
Constantinople, 1 14 1 31
Naples, 25 1 3 399
Rotterdam, 15 2 1 241
Santos, 4 5
Genoa, 6 2 100
Calcutta, 7 10 119

Disinfectants—
Bombay, 3 t. 15 c. £24
Shanghai, 9 9
Hamburg, 4 1 q. 7
Madras, 25 120
Calcutta, 1 9 38

Dried Blood—
Gd. Canary, 1 t. —

Dyestuffs—
Aniline Colours
Calcutta, 7 cs.
New York, 20 cks. 4 brls. 10 dms.
Santos, 7
Extracts
Barcelona. 40 cks.
Logwood
B. Ayres, 100 bgs.

Glycerine—
Bombay, 1 t. 7 c. £65
Rotterdam, 9 8 270
Yokohama, 1 5 1 q. 20
Genoa, 1 5 20
Leghorn, 1 6 55
Antwerp, 2 11 1 77

Lead Acetate—
Santos, 1 t. 1 c. £28

Magnesia—
Mexico City, 7 cs.
Oporto, 6 cks.
Puerto Cabello, 2

Magnesium Sulphate—
Alexandria, 100 kgs.
Demerara, 4 brls.
Guatemala, 20
Halifax, 10

Manure—
Rouen, 16 t. 3 c. £97
Las Palmas, 20 159

Paint—
Accra, 164 pks.
Alexandria, 320 kgs.
Antwerp, 10
Bombay, 27 dms.
Calcutta. 25
Constantinople, 150
Degama, 4 cks.
Delagoa Bay, 1
Demerara, 12 4
Havre, 7
Lagos, 51
Leghorn, 4
Lima. 25 cs.
Loanda, 2
M. Video, 58 pks.
Para, 8 cks.
Pimental, 2
St. John's, Nfd., 170 kgs. 2 cs.
Sapeli. 5 dms.
Sierra Leone, 20
Tongshau, 372 pks.
Valparaiso, 15

Painter's Colours—
Bombay, 2,015 kgs. 77 cs.
Johannesburg, 5
Madras, 20 cks.
New York, 8 pks.
Para, { 21 brls. 2 / 11 tcs. 33
Pelotas, 3
Penang, 10
Piræus, 13
Rio de Janeiro, 9 kgs.
Santa Catharina, 20
Vostizza, 2 brls.

Paraffin Wax—
Bahia, 9 cs.
Constantinople, 25
Corfu, 10
Genoa, 10
Leghorn, 100 bgs.
Patras, 4

Phosphorus –
Kingston, 3 c. £39
Mexico, 10 92
Monterey, 3 27
Vera Cruz, 8 72

Potassium Bichromate—
Rouen, 5 t. 2 c. £180
Santos, 5 1 q. 13

Potassium Carbonate—
Boston, 1 t. 16 c. £35

Potassium Chlorate—
Fairwater. 1 t. 5 c. £38
Gutujewski, 10 300
Hong Kong, 2 61
Kingston, 3 90
Libau, 5 150
Lisbon, 7 10 225
Monterey, 1 28
Naples, 3 90
Rio de Janeiro, 1 30
Rouen, 1 35
Tampico, 10 15
Vera Cruz 5 10 158

Potassium Chloride—
Rio de Janeiro, 1 t. £38

Potassium Cyanide—
Rio de Janeiro, 2 t. 9 c. 1 q. £220

Potassium Silicate—
Amsterdam, 1 t. 4 c. £10

Salt—
Algoa Bay, 10 t.
Amsterdam, 100
Antwerp. 155 1,000 sks.
Boston, 596
B. Ayres, 7 100 cs.
Chicago, 30
Degama, 90
Demerara, 17
Ghent. 335
Honolulu, 10
Kingston, 2 16 c.
Melbourne, 33
Montreal, 1,176
Newcastle, 170
New York, { 2,600 bgs. 1,110 sks. / 4 cs
Noqui, 500
Pt. Natal, 112 2,750
Quebec, 14,650
Rangoon, 982 t.
Rio de Janeiro, 100
Rosario, { 500 / 300 brls.
St. John's. N'fd., 100
Salt Pond, 1,000 bgs.
Sheridac, 4,800
Sydney, 234 t.
Warri, 150 bgs.

Salt Cake—
Antwerp, 60 t. 13 c. £63

Sheep Dip—
B. Ayres, 2 t. 11 c. £104
E. London, 7 cs. 35
Sydney, 12 19 c. 179

Soap—
Alexandria, 20 bxs.
Algoa Bay, 20 20 cs.
Antwerp, 2
Baltimore, 25
Barbadoes, 1,203
Bluefields, 100
Bombay, 875 382
Calcutta, 300 bdls.
C. C. Castle, 227
Cape Town, 1,300
Cavally, 20
Colombo 7
Colon, 5·9
Conakry, 264
Curacao, 50
Demerara, 1,743 10
Durban, 145
E. London, 100 870
Genoa, 28
Ghent, 10
Gibraltar, 600
Johannesburg, 10
Karachi, 5
Kingston, 2,578
Lagos, 615
Leghorn, 10
Lucca. 76
Mannheim, 280
Matadi, 50
Monrovia 10
Montego Bay, 76
Montreal, 2 cks.
Mossel Bay, 700 5
Manaos, 500
New York, { 8 brls. / 141 cs.
Noqui. 40
Old Calabar, 1,336 4
Opobo, 1,120
Para, 4
Pernambuco, 2
Pt. Natal, 575 50
Pram Pram, 50
Prevesa, 2
Rangoon, 802 1
Rotterdam, 216
Rouen, 20
St. John's, N'fd., 130
St. Lucia, 100
Santos, 25
Savanna'la Mar, 50
Sierra Leone, 122
Teneriffe, 180
Toronto, 1 100
Trinidad, 500
Venice, 20
Warri, 35
Zanzibar, 20 250 bdls.

Soap Lye—
Hamburg, 40 dms.
New York 199

Soda—
Calcutta, { 29 brls. / 86 pks. / 15 cks.
Catania,
Constantinople 30
M. Video, 15 kgs.

Soda Ash—
Aalborg, 200 bgs.
Amsterdam, 30
Bahia, 17 cks.
Barcelona, 20
Bombay, 84
Boston, 434 4 tcs.
B. Ayres, 42
Callao, 20
Copenhagen, 807 pks.
Dunedin, 64 cks.
Gefle, 200
Johannesburg, 80 kgs.
Lagos, 25 brls.
Melbourne, 93
M. Video, 75
Rio de Janeiro, 80
Santos, 20
Sydney, 3 tcs. 652
Syra, 50 brls.
Wellington. 200

Soda Crystals—
Alexandria, 308 brls.
Bahia, 10
Bombay, 150 kgs.
Penang, 10 cks.
Philadelphia, 84
Pisagua, 20

Sodium Bicarbonate –
Alexandria, 95 kgs.
Barcelona, 40
Batavia, 10
Bombay, 413
Calcutta, 523 pks.
Dunedin, 235
E. London, 8 cks.
Galatz, 30
Genoa, 190 36
Hamburg, 150 pks.
Ibrail, 48
Libau, 100
Malaga, 25
M. Video, 50
Montreal, 275
Nelson, 20
Newfairwater, 170
Otago, 40
Rangoon, 15 bgs.
Rouen, 403 kgs.
San Jose de Guatemala, 40
Sydney, 430 15 cks.
Tilsonburg, 25

Timaru, 10
Wanganui, 40
Wellington, { 30 hgs. 213 kgs.
Winnipeg, 200

Sodium Biarseniate—
Rio de Janeiro, 4 cks.

Sodium Carbonate—
Santos, 8 cks.

Sodium Chlorate—
Rio de Janeiro, 1 ck.

Sodium Hyposulphite—
Genoa, 10 brls.

Sodium Silicate—
Oporto, 5 brls.

Sulphur—

Boston,	75 t.			£319
Demerara,	14	7 c.	2 q.	86
Gothenburg,	103			429
Melbourne,		8		5
Natal,	6			32
Sydney,		8		5

Superphosphates—

Gd. Canary,	5 t.	10 c.	£—
Antwerp,	500		1,050

Tin Crystals—
Demerara, 1 t. £50

Varnish—
Antwerp, 14 cks.
Constantinople, 2
Genoa, 20 pks.
Leghorn, 9 cs.
Pasages, 3
Tongshau, 58 dms.

Verdigris—
Singapore, 13 c. 2 q. £30

White Lead—
Bahia, 55 kgs.
Lisbon, 2 cks.

Zinc Chloride—
Bombay, 6 t. 8 c. 3 q. £148

MANCHESTER.

Week ending July 20th.

Aniline Colours—
Germany, 1 cs.
Holland, 1 kg.

Aniline Oil—
Belgium, 5 dms.

Anthracene—
Germany, 108 cks.

Caustic Soda—
Bahia, 75 dms.

Chemicals *(otherwise undescribed)*
Antwerp, 4 cks.
Hamburg, 3
Rotterdam, { 8 kgs. 4 cks.

Colours—
Belgium, 2 kgs. 1 cs. 2 pks.

Copperas—
Alexandretta, 30 brls.
Alexandria, 149

Disinfectants—
Safed, 1 ck.

Glue—
Holland, 37 cks.
Germany, 12

Glycerine—
Germany, 5 crbys.

Linseed Oil—
Beyrout, 28 brls.

Logwood—
Russia, 20 t.

Naphthylamine—
Germany, 28 cks.

Naphthol—
Germany, 10 cks.
Holland, 5

Paint
Beyrout, 40 kgs.

Pitch—
Belgium, 4,471 c.

Rosin—
Malta, 6 brls.

Sodium Bicarbonate—
St. Denis, 34 kgs.

Sodium Naphthionate—
Switzerland, 21 cks.

Tallow—
Holland, 10 cks.

Tannic Acid—
Germany, 15 kgs.

Turpentine—
Beyrout, 9 brls. 10 dms.

HULL.

Week ending July 16th.

Alkali—
Riga, 100 kgs
Wasa, 11 cks.

Ammonium Sulphate—
Palermo, 95 bgs.
Rouen, 355

Bleaching Powder—
Helsingfors, 38 cks.

Caustic Soda—
Bari, 15 dms.
Danzig, 34
Helsingfors, 3 cks.
Riga, 52

Chemicals *(otherwise undescribed)*

Abo,	2 cks	1 cs.	15 pks.
Amsterdam,	236		
Antwerp,	1	2	
Christiania,	18		593 slbs.
Copenhagen,	50		
Danzig,		1	12 dms.
Gothenburg,	1		10 pks.
Hamburg,	5	58	
Libau,			6
New York,	90		
Rotterdam,		78	2
Riga,			1 dm.
Rouen,		10	
St. Petersburg,		39	10 pks.
Wyburg,	{ 60 30 bgs.		

Cottonseed Oil—

Antwerp,	800 c.
Copenhagen,	200
Danzig,	150
Gothenburg,	403
Hamburg,	1,200
Rotterdam,	685
Rouen,	51
Stettin,	24

Dyestuffs *(otherwise undescribed)*
Christiania, 25 bls.
Danzig, 1 cs.
Rotterdam, 24 cks.

Glue—
New York, 102 cks.

Linseed Oil—
Aalesund, 18 c.
Antwerp, 52
Christiania, 411
Christiansund, 36
Copenhagen, 7
Drontheim, 141
Hamburg, 304
Rouen, 8
Stavanger, 53

Ochre—
Gothenburg, 4 cks.

Paint—
Antwerp, 5 cks.
Christiania, 2
Ghent, 2 brls.
Rouen, 12 dms.
Stavanger, 1

Painters' Colours—

Amsterdam,	6 cks.		1 pk.
Antwerp,	24		304 dms.
Bremen,	8		
Christiania,	44	1 cs.	
Copenhagen,	2	1	16
Danzig,	6		
Drontheim,	5		
Dunkirk,		1	12
Gothenburg,	3		
Hamburg,	19		26
Hango,		1	
Helsingfors,	1	1	
New York,	5		
Rotterdam,	3		2
Rouen,	22		
Stettin,	44	2	44 pks.
Stockholm,	14	1	

Slag—
Halmstadt, 521 t.
Norrkoping, 954
Ystad, 601

Slag Meal—
Gothenburg, 140 t.
Riga, 404 bgs.
Wasa, 1,016

Soap—
Abo, 2 cs.
Christiania, 2
Stettin, 3
Wyburg, 2

Tallow—
Amsterdam, 3 cks.
Hamburg, 100
Helsingfors, 32
Stavanger, 10 brls.

Tar—
Amsterdam, 14 cks.
Antwerp, 8
Christiania, 14
Copenhagen, 15
Drontheim, 3
Hamburg, 15
Helsingfors, 20 10 brls.
Rotterdam, 5
Stettin, 5
Wyburg, 25

Varnish—
Antwerp, 2 cs.
Christiania, 1 ck.
Ghent, 2 10
Gothenburg, 3
Hamburg, 1
Riga, 1
St. Petersburg, 7
Stettin, 6

GLASGOW.

Week ending July 21st.

Alumina Sulphate—
Bombay, £24 10s.

Ammonium Sulphate—
Amsterdam, 51 t. 9 c.
Danzig, 13

Aniline—
Calcutta, £57 10s.

Bleaching Powder—
Montreal, 21 t. 1 c.

Carbolic Acid—
Rotterdam, £200

Coal Products
Pitch
Bombay, £60
Tar
Bombay, £71 15s.
Trieste, 39 10
Danzig, 237 t. 10 c.

Extracts—
Cornwall, £333

Farina—
Melbourne, £57 10s.

Iodine—
Rotterdam, £740

Manganese (Recovered)—
Fiume, 9 t. 19 c.
Rotterdam, £120

Paint—
Bergen, 9 c.

Painters' Colours—

Calcutta,	£739	12s.
Colombo,	152	10
Melbourne,	34	0
Rotterdam,	1	5
Tunis,	27	0

Paraffin Wax—

Amsterdam,	£18
Fiume,	840
Trieste,	33

Potassium Bichromate—

Montreal,	£986
Rotterdam,	72

Potassium Cyanide—

Madras,	£936
Melbourne,	480
Sydney,	290

Potassium Prussiate—
Montreal, £79

Soap—
Bombay, 1 t. 14¼ c.

Sodium Peroxide—
Victoria, £26

Varnish—
Trieste, £20

TYNE.

Week ending July 16th.

Alkali—
Amsterdam, 32 t. 11 c.
Bergen, 1 12
Christiania, 8 6
Rotterdam, 6

Alum Waste—
Copenhagen, 21 t. 18 c.

Antimony—
Hamburg, 1 t.
Rotterdam, 10 c.

Barium Binoxide—
Antwerp, 10 t. 1 c.
Genoa, 5 6
Rouen, 9 13

Barytes—
Antwerp, 1 t.
Hamburg, 7 13 c.

Bleaching Powder—
Amsterdam, 20 t. 7 c.
Christiania, 18 2
Copenhagen, 3 12
Drontheim, 11 16
Hamburg, 1 6
Rotterdam, 14 13

Bone Grease—
Genoa, 5 t. 3 c.

Caustic Soda—
Aarhuus, 2 t. 12 c.
Christiania, 4 4
Drontheim, 3 9
Hamburg, 56 5

Flour Spar—
Gothenburg, 50 t. 10 c.

Litharge—
Amsterdam, 11 c.
Christiania, 12
Gothenburg, 1 t. 6

Magnesia—
Antwerp, 1 c.
Copenhagen, 2 t. 4
Hamburg, 1 5
Rotterdam, 10

Manganese—
Antwerp, 2 q.

Paint—
Antwerp, 1 t. 7 c.
Bastia, 4
Bergen, 1 2
Copenhagen, 1
Hamburg, 1 6
Rotterdam, 1 5

Pyridine—
Hamburg, 2 t. 8 c.

Soda—
Bergen, 2 t. 17 c.
Christiania, 19 14
Rotterdam, 14 19

Soda Ash—
Hamburg, 4 t. 3 c.

Soda Crystals—
Archangel, 8 c.

Sodium Hyposulphite—
Copenhagen, 1 t. 2 c.

Sodium Sulphate—
Christiania, 10 t. 1 c.
Copenhagen, 3 18

Tallow—
Genoa, 32 t. 18 c.

Zinc Ashes—
Antwerp, 3 t. 10 c.

GOOLE.

Week ending July 13th.

Chemicals *(otherwise undescribed)*
Amsterdam, 2 cks.
Ghent, 1
Hamburg, 15

Coal Products *(otherwise undes.)—*
Amsterdam, 143 cks.
Boulogne, 7 1 cs.
Ghent, 9
Hamburg, 35 2 12 pks.

Colours—
Boulogne, 9 cks. 1 cs.
Ghent, 1

Dyestuffs *(otherwise undescribed)*
Ghent, 2 cks. 1 cs. 16 pks.
Hamburg, 2

Manure—
Dunkirk, 421 bgs.
Falkenberg, 3,449
Ghent, 166
Hamburg, 100
Warberg, 2,000

GRIMSBY.

Week ending July 16th.

Caoutchouc—
Gothenburg, 3 cks. 1 ble.
Malmo, 2 cs.

Chemicals *(otherwise undescribed)*
Antwerp, 13 pks.
Dieppe, 3 cs.

Coal Products *(otherwise undes.)—*
Dieppe, 26 cks. 5 pks.

Colours—
Antwerp, 5 pks.
Hamburg, 2 cks. 1 brl.
Rotterdam, 2

Guano
Hamburg, 667 bgs.

Manure—
Gothenburg, 143 t.

PRICES CURRENT.

WEDNESDAY, JULY 27TH, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	6/-	&	8/6
,, Glacial .. .. ,,		37	6
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	15	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	0	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B. .. .. ,,	0	0	2½
,, =24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	9	12	6
,, ,, (grey) Hull .. .. ,,	9	10	0
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	5
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4½
Benzol, 90's .. .. per gallon	0	0	10
,, 50/90 ,, ... ,,	0	0	10
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. per lb.	0	0	7
,, (liquid 95/97% .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	0	19	6
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	3
Copper .. .. per ton	50	0	0
,, Sulphate .. .. ,,	16	7	6
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	2	6
,, Litharge Flake (ex ship) .. .. ,,	17	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	10	0
,, *Carbonate (white lead) pure* .. .. .. ,,	17	0	0
,, *Nitrate*	20	0	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	10	0	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	5	0
,, Borate .. .. per cwt.	2	5	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P .. .. .. ,,	0	4	0
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	5	0
Stearine .. .. per ton	24	10	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	7	6
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98% .. .. ,,	0	1	3
,, Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
,, ,, (Caustic Potash) 75/80 % .. ,,	19	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton f.o.r. w'ks.	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, f.o.r. w'ks.	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, f.o.r. w'ks.	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,, f.o.r. w'ks.	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, f.o.r. w'ks.	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton 1 ton lots	8	2	6
,, ,, (74 % Caustic Soda) ,, ,, ,, 1 ton lots	7	17	6
,, ,, (70 % Caustic Soda) ,, ,, ,, 1 ton lots	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, 1 ton lots	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, 1 ton lots	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	4½
,, Nitrite, 98 % .. .. per ton	25	10	0
,, Phosphate .. .. ,,	9	5	0
,, Prussiate .. .. per lb.	0	0	5¾
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6¼
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	21	0	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	74	5	0
Zinc (Spelter) .. .. ,,	20	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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AND

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ADVERTISEMENTS.

TENDER.

TO OXIDE OF IRON MERCHANTS.

E Corporation of Birkenhead are prepared to ceive TENDERS for the Supply of 200 Tons of OXIDE OF IRON.
of tender and other information may be obtained from Mr. T. O. Paterson, ineer, Gas Works, Thomas-street.
s, sealed and endorsed "Tender for Oxide of Iron," to be sent to me not 5 p.m. on Friday, 19th August, 1898.
ries to be made within one month of written instructions from the Gas
rporation do not bind themselves to accept the lowest or any tender.
By order, ALFRED GILL, Town Clerk.
Hall, Birkenhead, 4th August, 1898.

NUFACTURERS' PRACTICAL UP-TO-DATE RECIPE BOOK (Jameson's): Unsoiled Copy FOR SALE, cheap. py "CHEMICAL RECIPES," third edition, by Atlas Chemical Co. s. 6d.—J. Kennell, 134, Mayes-road, Wood Green, London, N.

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es, reports, and correspondence on all matters of interest to mical and allied industries, home and foreign, are solicited. ondents should condense their matter as much as possible, one side only of the paper, and in all cases give their names resses, not necessarily for publication. Sketches should be separate sheets.

CURRENT TOPICS.

THE CASTNER KELLNER PATENT CASE.

IN our issue of October 30, 1897, we dealt at some length with the subject of the Rhodin Patent, which had just been introduced to the world at the Hotel Cecil.

To-day we put on record the judgment of Mr. Justice Bigham in reference to this same patent, an action for infringement having been brought against the owners thereof—the Commercial Development Corporation—by the Castner Kellner Alkali Company. In coming to the conclusion that the plaintiffs were entitled to succeed, Mr. Justice Bigham took exactly the same view of the case as we did ourselves nine months ago, and held that the wonderful arrangement which was to justify the outlay of a million of money "was nothing more nor less than the plaintiffs' apparatus."

We hope that those people who were sufficiently devoid of common sense to subscribe when the Rhodin patent was floated are now pleased with the use that is being made of their money. Perhaps in the fulness of time some such one may send us a balance sheet for our edification and comment. Meanwhile, what are the assets of the defendant Company?

COAL AND COMPETITION.

Numerous are the scares which have been created by the importation of American iron and steel into this country, but in several cases an inquiry into the exact conditions has robbed the scare of its potency.

Nevertheless, the incidents, even if they have been worked for rather more than they were worth, were sufficient to show what we might expect if our iron and steel trades were brought to a standstill by a serious struggle between labour and capital. In much the same way the dispute in the Welsh coal trade has enabled our cousins in the States to show what they can do in regard to coal.

The fact that American anthracite coal—as good as Welsh coal for all practical purposes—can be delivered in London in seventeen days should go a long way towards convincing employés that nowadays employers have something more to do than to produce and sell at their own price.

It is true that the Welsh miners can fondly cling to the fact that only under abnormal circumstances, such as the present, can the United States compete with them in the *home* markets, but possibly they will now give more heed to the hold which such disruptions of trade enable the American anthracite producers to gain upon the *foreign* markets. Hitherto the Welsh miners have fared well under their sliding scale arrangement, because we have enjoyed what has been practically a monopoly in these foreign markets.

It is the growing fierceness of competition in these particular quarters that has caused colliery owners so much anxiety. Now that we have given the Americans special opportunities of showing how well they can serve users in South Africa and the Atlantic Islands, we fear some of this

anxiety may be transferred to the miners themselves in the form of anxiety for their daily bread.

Throughout Europe there is a growing tendency to favour America, Germany, and Belgium with metallurgical, ship-building and engineering orders—not because there is no longer a preference for British workmanship, but because the fickleness and ungovernable caprice of our craftsmen has led to such uncertainty in the prospects of completion and delivery, that outsiders have wearied of delays and disappointments. In like manner we are now doing our best to depreciate ourselves in the eyes of steam coal consumers abroad, by enabling competitors to step in. The situation as far as coal is concerned is aggravated by the fact that, unfortunately, there is nothing to choose between our coal and American, which reduces the matter of preference to a question of convenience. Knowing this, we have been compelled, through differences at home, to enable foreign competitors to parade their promptitude, and contrast their conveniences with our uncertainties. It will take more than soft words to recover the ground we have lost during the last four months. How much will it cost, and how much will the miners have to contribute?

THE MOTIVE POWER SUPPLIED BY THE RIVER ARC.

BELOW Modane the waters of the Arc are utilised for supplying motive power to several large industrial establishments. The first of these is at La Praz, 3¾ miles from Modane, the water being diverted by damming the stream about half way down into a large reservoir to facilitate the deposition of the sand, which is brought down in such large quantity by the current that, even with this precaution, the turbines are worn out after six months' continuous work. A conduit, 80 in. in width, made of boiler plate 0·275 in.—7 mm.—at the upper end and 0·39 in. – 10 mm.—at the lower end, and supported on pillars of masonry 80 in. apart, conveys the water from the settling basin, a distance of 1,640 yards, the fall being 115 ft.—35 m.—and the delivery 1,540 gallons—7 cubic metres per second. There are a number of small turbines and three of 700 horse-power each, the latter worked at a speed of 300 revolutions per minute and coupled direct on to vertical-shaft dynamos, two of which are of the 24-pole type, and the third a unipolar machine constructed by Siemens, and developing a 15,000-ampère 40-volt current. At present, the output of the establishment is about one ton of aluminium per diem, and calcium carbide is also manufactured; but when the new conduit is completed another 10,000 horse-power will be available—a grand total of 13,000 horse-power. This second conduit is in two lengths of 1,640 yards. The upper one is tunnelled through the hill-side, the lower portion, which is 94½ in. wide, being arranged like the one already described. The total fall from the intake to the turbines—25 in number—is 246 ft., which, with a delivery of 2,640 gallons—12 cubic metres—per second, will produce 10,000 horse-power.

About three miles lower down the river is a large electro-chemical works, and here the water is conveyed for over 1¼ mile through an underground channel to a height of 230ft. above the factory, being conducted to the turbines by two sheet-iron pipes about 330 yards long and 47in.—1·20m.—in diameter, with a delivery of 1,760 gallons per second. There are twelve 200-horse power turbines and four of 400-horse power each – a total of 4,000-horse power—all fitted with removable crowns. Their speed is 300 revolutions per minute, and they are coupled direct to Thury dynamos, the smaller ones of the 6-pole type and producing a 200-volt 500-ampère current, whilst the larger ones are 12-polar and develop a current of 1,000 ampères at 200 volts. In these works potassium chlorate, sodium chlorate, and calcium carbide are manufactured by the electrolytic process.

The third large establishment is the Calypso Aluminium Works, situated about three miles below St. Michel, and obtaining water from the Valloirette through a conduit 875 yards in length, partly underground, which discharges into two iron pipes, one with a diameter of 26½in. 60 cm.—and a capacity of 220 gallons per second, and the other 55in.—1 40m.—in diameter. There are two 1,250-horse power turbines making 140 revolutions per minute, coupled direct to 12-pole Weyher and Richemond dynamos, producing a 6,000 ampère 150-volt current. An extension of the establishment is in contemplation, a new channel 3,280 yards long, giving a fall of 1,968ft., and discharging into two 31½in.—80 cm.—conduits, being projected, which will yield an additional 12,000-horse power.—*Inst. C.E. Abstracts.*

THE TREATMENT OF MANCHESTER SEWAGE.

CITY SURVEYOR'S ANNUAL REPORT.

THE City Surveyor's annual report on the treatment of sewage at Davyhulme for the year ending 31st December, 1897, was submitted at the meeting of the Manchester City Council on Wednesday last. Details of expenditure for the year are given in tabulated statements under the following headings:—(1) Sewage Precipitation; (2) Sludge Pressing and Disposal; (3) Filtration; (4) Coal Supply; (5) Sundries and Incidental Expenses; (6) Summary of Annual cost of Treatment. The net cost of the work for the year has been £19,089. 9s. 7d., as against £15,780. 5s. 0½d. for the year 1896. These sums are exclusive of interest and repayment of capital, and are equivalent to £2. 11s. 9d. and £2. 14s. 3d. respectively per million gallons of sewage treated. A summary of the cost of treating the sewage for the year 1897 shows a reduction of 2s. 0¾d. per million gallons on the cost of treatment for the year 1896. The volume of sewage delivered and treated during the year was 7,373,917,000 gallons as against 5,818,200,000 gallons for 1896, being an increase of 1,555,717,000, or 26·7 per cent. on the preceding year. The estimated population contributing to the sewerage system has increased from 400,360 on January 1st, 1897, to 512,500 on December 31st, 1897, being an increase of 112,140, or 28 per cent. The increase of population contributing to the sewerage system during the year 1897 has exceeded the increase during the year 1896 by 49,780, or 79 8 per cent. The daily average flow of sewage was 20,426,363 gallons, that for 1896 being 15,896,721 gallons, showing an increase at the rate of 4,529,642 gallons per day, or 28·5 per cent. The average daily flow of sewage treated per head has ranged from a minimum of 39·3 gallons per head for the month ending May 19th to 50 gallons per head for the month ending December 1st. The average amount of wet sludge precipitated has been 21·16 tons per million gallons, as against 21·84 tons for the previous year, yielding 7 tons 12 cwts. of pressed cake per million gallons, as compared with 7 tons 18·4 cwts. for the year 1896. The proportion of chemicals used during the year was less than in the preceding year. When the sewage is diluted by large quantities of storm water it has been customary to suspend treatment during the flush, as the chemicals have but little effect in increasing the purity of effluent at such times, owing to the rapidity with which the water passes through the tanks, and to the extremely attenuated condition of flocculent organic matter which it is the function of the precipitant to carry down. When it is necessary to allow a portion of the storm water to pass directly by way of the storm overflow into the canal, the addition of chemicals would only increase the amount of suspended matter in the sewage. Treatment was stopped on account of storm water on 21 occasions during the year for a total period of 128 hours. The results of chemical treatment and precipitation are shown in a series of tables containing the results of the analyses made at various times. On no occasion did the oxygen absorption come within the requirements of the Mersey and Irwell Joint Committee, and the albuminoid ammonia was below the grain per gallon in only a few instances. Land filters have been at work as far as practicable during the year. Experiments have been continued with the coke and cinder filters which were constructed at the end of 1895 under the advice of Sir Henry Roscoe. As in 1896 the cinder filter has throughout given better results than the coke, both as regards the percentage reduction of impurity effected, and in non-putrescibility. The results obtained from the experimental coal filters are equal to or even better than those obtained from the cinder filter. During the year an experimental red sand and a burnt clay filter have also been tried, and likewise an automatic self-cleansing filter. Various experiments have been made during the year in connection with the settlement of solids in suspension in the sewage without the addition of chemicals, the exposure of the effluent to the air, and the passing of the air through the effluent.

EFFECT OF THE CANAL WATER.

Tests have also been made to ascertain the effect of the effluent on the water in the Ship Canal, and the effect of the admixture of acid and of water with the effluent. In all cases the effluent contains the larger amount of impurity than the Canal water, although in most cases, unless diluted by rain, the amount of impurity in the Ship Canal above Barton Locks is sufficient to cause putrefaction of incubation. The putrefaction which takes place in a mixture of Ship Canal water and tank effluent is generally greater in amount than in either taken separately. The experiments also showed that although it is possible to sterilise the effluent by the addition of a small quantity of acid, yet if a sterilised effluent be mixed with Ship Canal water the effect of the acid is largely destroyed and putrefaction again occurs. If an acidified sample of tank effluent be mixed with tap water the sterilising effect of acid appears to be maintained. When the Ship Canal water is largely diluted by rain, putrefaction does not, as a rule, take place in the mixture of effluent and Canal water. Sea salt has been added to samples of tank effluent with the result that a large quantity is found to be necessary to prevent putrefaction taking place.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Alkali Compounds of Albuminous Compounds. C. A. Jensen. 15,719. July 18.
Distilling Rosin. E. J. Scott. 15,721. July 18.
Electrolytic Production of Chromic Acid. O. Imray. 15,724. July 18.
Manufacture of Soap. H. A. Tilcock. 15,773. July 19.
Bath Salt. F. F. Myles. 15,807. July 19.
Chemical Antiseptic. A. E. Berry and A. Boake-Roberts and Co., Ld. 15,819. July 19.
Purifying Woolsuds, etc. B. Walker. 15,852. July 20.
Manufacture of Acetone. J. L. Hawliczek. 15,907. July 21.
Process and Apparatus for Manufacture of Sulphuric Anhydride and Sulphuric Acid. J. Y. Johnson. 15,947. July 21.
Manufacture of Sulphuric Anhydride. J. Y. Johnson. 15,948. July 21.
Manufacture of Sulphuric Anhydride. J. Y. Johnson. 15,949. July 21.
Manufacture of Sulphuric Anhydride. J. Y. Johnson. 15,950. July 21.
Cell for the Electrolysis of Alkaline Chloride Solutions. J. W. Kynaston. 15,967. July 21.
Electro-chemical Production of Zinc Oxide. E. Bailey and T. G. Hodgson. 16,012. July 22.
Pressure Filter. E. J. Duff. 16,014. July 22.
Electric Furnaces. G. L. Palmer and E. Williams. 16,029. July 22.
Manufacture of Matches. Bohy, Gallay, and Co. 16,037. July 22.
Antiseptic and Disinfectant. W. P. Thompson. 16,046. July 22.
Manufacture of Soap. H. Smith. 16,098. July 23.
Producing Iodoform. M. Otto. 16,122. July 23.
Electrolysis of Alkaline Chloride. O. Imray. 16,129. July 23.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Purification Processes for Treating Sewage and other Liquids. J. J. Deery, 1,110, Betz Building, Philadelphia, Pa., U.S.A. Eng. Pat. 5,603. March 8, 1898.

The sewage is conveyed in the sewers to a pumping station placed at some convenient point, where the sewage is pumped into a reservoir. The latter is provided with a distributor and a suspended screening filter through which the crude sewage passes into the bottom of the reservoir. The filtering material is of coke, &c., which can be burnt under the boilers when exhausted as a filtering medium. A current of air is drawn over the top and beneath the filter by the boiler chimney so that the spray from the distributor, and the filtered liquid as it falls to the bottom of the reservoir, are both aerated. The liquid is then passed through bacterial filters. There are 13 figures. Provision is made for recovering grease from the screening filter.

Improvements in Retorts for the Drying or Carbonisation of Sewage Matter, and generally of Vegetable or other Substances. W. H. Bowers, Brookfield Chemical Works, West Gorton, Manchester. Eng. Pat. 19,284. August 20, 1897.

The retort is of the horizontal type, the material being driven along a zig-zag path by an endless chain, carrying scrapers. There are four figures showing the details of the retort, which was fully described and illustrated in the *Journal*, No. 557, p. 53.

A Process for the Economic Production of Cyanides and their Derivatives, and other Nitrogen Compounds. D. Lance, 131, Avenue de Villiers, Paris, and R. L. E. de Bourgade, 48, Avenue de Ceinture, Enghien-les-Bains. Eng. Pat. 26,326. November 11, 1897. (Under International Convention April 12, 1897.)

A mixture of hydrogen, nitrogen, and ammonia is caused to re-act with carbon at a high temperature, obtained by electrical or other means. For hydrogen, any carbides of hydrogen may be used. In this way acetylenide of ammonia is formed in which the free nitrogen becomes fixed, yielding cyanide. Industrially 2,000 litres of hydrocarbons and 200 litres of atmospheric nitrogen are passed together with 80 litres of ammonia over carbon heated in porcelain retorts to about 1,000° C. The escaping gases are passed through an alcoholic solution of soda or potash to form the cyanide salt, the latter being precipitated as a powder. The ammonia is scrubbed out of the residual gases, and the nitrogen and hydrogen returned to a holder to be used in preparing a fresh charge of gases. To produce ferrocyanide, iron turnings are added to the alcoholic alkaline solution, which is heated to 100°. Prussian blue is obtained by passing the gases through a dilute solution of iron and hydrochloric acid, the gases passing as before to the holder, with the exception of the ammonia, which is fixed in the solution as chloride, and is recovered by crystallation.

Process for the Extraction of Pure Metals or Metallic Alloys, and the Production of Carbides by Electric Heat. H. Aschermann, 5, Terasse, Cassel, Germany. Eng. Pat. 7,493. March 28, 1898.

This is a modification of patent 859, 1897, in which carbon is added to a mixure of a metallic sulphide and lime, the whole being heated in an electric furnace. The iron sulphide (FeS_2), lime, and carbon are mixed in theoretical quantities, and on heating in the electric furnace, metallic iron is obtained on one side and carbide on the other, with a simultaneous saving of 40% in the electric current. Metallic oxides and sulphides can be treated in a similar manner.

Improvements in the Process of Manufacturing Valuable Organic Products from Seaweed. A. Krefting, 18, Kort Aldersgade, Christiania, Norway. Eng. Pat. 12,275. May 31, 1898.

During the solution of the acid-treated seaweed in a weak lye of sodium carbonate, as described in patent 11,538, 1896 (*C.T.J.* 489, p. 209), there is a liability to fermentation in summer, while the solution progresses but slowly in winter. To avoid these drawbacks a solution of hypochlorite of soda, potash, or magnesia is substituted. As the lye must not be stronger than 1 to 2%, an economy in production is effected by merely electrolysing the seawater so as to produce a maximum of hypochlorite. Putrefaction and fermentation are thus prevented in summer and the solution accelerated in winter. The hypochlorite can, of course, be prepared by adding bleach to the existing soda lye if desired.

Improvements in the Manufacture of Valuable Organic Products from Seaweed. A. Krefting, 18, Kort Aldersgade, Christiania, Norway. Eng. Pat. 12,277. May 31, 1898.

Two modifications in procedure are described, with reference to the process of obtaining tang-acid, &c., from seaweed, as set forth in patent 11,538, 1896 (*C.T.J.* 489, p. 209). It has been found in practice that to attain the best results, the strength of the solution in the acid treatment must not exceed two to three per cent. The same applies to the alkaline lye used for dissolving the treated seaweed. These strengths are essential to the successful operation of the process.

THE USE OF BORACIC ACID.—A prosecution of much importance to creamery companies was instituted at Chester, last week, by the Town Council against Emma Rowe, a shopkeeper in Chester Market. She was charged with selling three bottles of cream, labelled "Pure fresh cream from the Wigtownshire Creamery Company," which on analysis was found to contain 23 grains of boracic acid to every pint of cream.—Mr. Smith (town clerk), who prosecuted, contended that under the Food and Drugs Act this cream was sold to the prejudice of the consumer.—Mr. Churton, in defence, said the Creamery Company were the real defendants. A conviction would not only cripple a growing industry, but would curtail the public privileges. His clients had sold cream of exactly the same substance, and in the same manner for eleven years without complaint. The boracic acid was added as a preservative, and it would be as impossible to supply cream without it as sherry without alcohol. The company had two creameries at Stranraer, and dealt with 7,000 gallons of milk daily. They had five vans delivering cream and butter in Edinburgh and Glasgow. It was used by all the most distinguished physicians in Edinburgh, and they would not do so if it was injurious to health.—Mr. Robert Young, a member of the Wigtownshire Creamery Company, said without the preservative it would be impossible to keep cream sweet. Boracic acid was considered the best antiseptic, and was almost universally used. They did not dispute the analysis.—Cross-examined by Mr. Smith, he said they did not know that the use of boracic acid had been prohibited in the German Army, that it had been found more dangerous than it was originally supposed to be, nor that in the present edition of the British Pharmacopœia the dose had been reduced by one-half.—Mr. Edward Davies, analyst, Liverpool, deposed that if a person consumed 40 bottles of cream the acid would do him no harm. Boracic acid was tasteless, and, as far as he knew, not injurious.—The Bench dismissed the summons on the ground that it had not been proved to their satisfaction that the cream contained anything injurious to health.—Mr Smith applied for a case on the point he had raised as to whether boracic acid was injurious to health.—Mr. Churton suggested that as it was an important point it would be better for Mr. Smith to put his case in writing.—The justices accepted this suggestion.

Legal Intelligence.

HIGH COURT OF JUSTICE.

CHANCERY DIVISION.

(Before Mr. Justice Bigham, sitting as an additional Judge of the Chancery Division.)

THE CASTNER KELLNER ALKALI CO. *v.* THE COMMERCIAL DEVELOPMENT CORPORATION, LTD.

JUDGMENT FOR THE PLAINTIFFS.

JUDGMENT was delivered on Wednesday in this action, the hearing of which was begun on July 13th and occupied six days. A report of the case appeared in the *Journal* 483, p. 53.

Mr. Fletcher Moulton, Q.C., Mr. Bousfield, Q.C., Mr. J. Graham, Mr. A. J. Walter, and Lord Robert Cecil appeared for the plaintiffs; and Mr. T. Terrell, Q.C., Mr. Astbury, Q.C., Mr. MacConkey, and Mr. J. H. Gray for the defendants.

Mr. Justice Bigham delivered judgment as follows:—This is an action brought for an infringement and to restrain further threatened infringements of letters patent No. 20,259 of 1894, for an invention of improvements in electrolytic apparatus for decomposing metallic salts. The infringement is said to consist of the use of certain apparatus made according to the specification, and other letters patent, No. 21,509 of 1896, belonging to the defendants. The defences are practically two. First, the defendants say that the plaintiffs' patent is bad for disconformity; and, secondly, deny the infringement. Both the apparatus of the plaintiffs and that of the defendants are designed for use in the manufacture of an article of commerce known as caustic soda. It is

COMMON GROUND

that caustic soda is produced by a process which may be shortly described as follows:—A solution of common salt in water is subjected to an electric current while in contact with mercury, the effect being that the sodium in solution is precipitated into the mercury and forms an amalgam. The chlorine, which is also contained in the solution, is by the same operation driven off in the form of a gas. The amalgam of mercury and sodium is then subjected to the operation of ordinary water; the chemical effect is that the sodium in the amalgam leaves the amalgam and combines with the oxygen in the water, forming oxide of sodium, ordinarily called soda. The water thus impregnated is then evaporated or otherwise dealt with, the product resulting being caustic soda. The chamber in which the amalgam is produced is called the "decomposing chamber," that in which the sodium is extracted from the amalgam is called the combining chamber. Thus the mercury is charged with and discharged of the sodium, and the operation can be repeated with the same body of mercury for an indefinite number of times. This method of producing caustic soda has been matter of common knowledge for a very long time, and is not the subject of any patent. The plaintiffs' and the defendants' patents relate exclusively to the apparatus for carrying out the process. It is to be observed that the plaintiffs' patent (known as Kellner's) had never been put to practical use, the plaintiffs employing other apparatus which they think preferable. So also with the defendants' patent (known as Rhodin's). Hitherto it has only been tried experimentally and not put to any real commercial test, although a large sum has been spent in the erection of plant. But I suppose the potentialities of both patents are considered great enough to justify the expenditure of money which has been incurred over this case. Many apparatus have been from time to time devised for carrying out the process which I have described. One of them, which was frequently referred to during the trial, was known as the Castner apparatus, and was the subject of a patent taken out in 1892. It provided a continuous process of production in the following way:—A vessel was divided into two parts by a vertical diaphragm of metal. The diaphragm did not reach to the bottom of the vessel. Sufficient mercury was then poured into the vessel to touch and reach slightly above the bottom edge of the diaphragm, thus sealing with mercury the two halves of the vessel. Down the centre of the vessel and passing through the diaphragm was a shaft, at the bottom end of which were radiating paddles passing through the mercury and extending from the shaft to the edge of the vessel. These paddles could be moved round by means of the shaft, and, in so moving, they caused the mercury to travel round the bottom of the vessel in which it lay, so that it circulated from the bottom of the one half of the vessel to the other half, and so on. Above the mercury in the one half of the vessel was introduced a quantity of salt solution. Above the mercury in the other half was introduced a quantity of water. The electric current was then applied through the salt, the paddles were worked, and the operation began. As the paddles moved the mercury round, the mercury went through a process of charging itself with and discharging itself of the sodium contained in the salt solution. This apparatus provided a means of producing caustic soda by a continuous process carried on by means of a quantity of mercury moving round and round in its containing vessel. There had been other apparatus invented for producing caustic soda, and in all of them, as I understand, a moving body of mercury—that is to say, a body of mercury moving relatively to its containing vessel—was an essential characteristic.

THE KELLNER PATENT.

In 1894 Dr. Kellner, of Vienna, took out the patent which the plaintiffs now own and which they allege the defendants have infringed. Dr. Kellner in his specification describes his invention as an apparatus for the electrolysis of alkaline salts with the aid of a stationary mercury cathode. Instead of having recourse to a mercury cathode which is moved by paddles or otherwise relatively to its containing vessel, he provides a stationary mercury cathode—that is to say, he provides a body of mercury which is always stationary in its containing vessel; it does not move round, nor does it move backwards or forwards in its containing vessel. He thus dispenses with the paddles or other machinery for putting the mercury in motion, and is able to conduct the operation of electrolysis with a less quantity of mercury than is required in the Castner process. His provisional specification describes his invention in the following words:—"This invention has reference to an apparatus for the electrolysis of alkaline salts with the aid of a stationary mercury cathode in which the amalgam formed by electrolytic action has its location changed from the decomposing chamber in which it is produced to a combining chamber in which it is decomposed, and the cathion combined with water, an acid, or other body, by the shifting of a partition which is adapted to be moved to and fro in the mercury, and serves to separate the two aforesaid chambers from each other. The partition is in this case made in the form of a bell closed at its lower edge by a mercury seal and enclosing the decomposing chamber, so that the amalgam in the latter is caused by the shifting of the bell to have its location alternately on one side and on the other side of the bell without itself changing or moving its position, and thus is caused to gain access to and become situated in the combining chamber, whilst the mercury on the other side of the partition, which was previously situated in the combining chamber, effects the amalgamation of the metal that is being separated by the electrolytic decomposition of the electrolyte. In this way a considerable output can be obtained from the apparatus with a comparatively small quantity of mercury, because both operations can take place simultaneously and uninterruptedly." It was argued on behalf of the defendants that this invention was bad for want of subject matter and because it was of no utility. But I think, having regard to the known processes at the date of the patent, and the character of the changes in the apparatus made by Dr. Kellner, the invention was new and sufficiently ingenious to form the subject matter of a grant of letters patent, and, although possibly the apparatus was not capable of producing the best results in comparison with other apparatus, I think it offered a useful alternative method, and, therefore, complied with all the necessary requirements as to utility. Now, after describing the nature of his invention in his provisional specification, Dr. Kellner proceeded by means of five diagrams to show how the apparatus might be constructed and worked. The defendants pointed out truly enough that the apparatus described in these diagrams contemplated only a to and fro movement of the bell or line of bells over the surface of the mercury, and they then turned to the complete specification and insisted that the latter departed from the provisional specification in material particulars which involved a fatal disconformity, inasmuch as they entirely destroyed the notion of a stationary mercury cathode which was the essential part of the patented apparatus. It is necessary to remember how the apparatus described in the provisional specification works. The bell which encloses or forms the decomposing chamber, and the open bottom of which is sealed by the mercury, is made to move to and fro, and, in order that it may not carry the mercury with it as it so moves, openings in the shape of notches are made in the bottom edge of the bell, or, if not, small sluices are made on the bottom of the vessel on which the bell rests. Thus the bell moves backwards and forwards without moving the mercury, and the mercury which is alternately under the bell and outside the bell is thus in turn charged with and discharged of the sodium. Now turning to the complete specification, we find four additional diagrams numbered 6, 7, 8, 9. Fig. 6 is described in the complete specification as a modified construction of the apparatus shown in fig. 2. It involves merely a change in the contents of the bell and the necessary alterations occasioned by the change. The bell is now made to hold the water instead of the solution of salt, and this becomes a combining chamber instead of a decomposing chamber. The mercury cathode remains stationery as before, and the bell or line of bells moves to and fro as originally described. This modification in my opinion involves no departure from the provisional specification. But it is upon the change introduced by figures 7 and 8 that the defendants mainly rely in support of their defence of disconformity. These figures are described as "a further modified construction of the said apparatus," viz., the apparatus which had been protected by the provisional specification, and the main question in this

action—indeed, I am not sure that it is not in reality the only question—is whether they are merely a modified construction of or whether they are something which involves a departure from the provisional specification. The change introduced by these two diagrams and the description of them may be stated as follows:—Instead of the bells being arranged in a straight row and made to move backwards and forwards over a stationary mercury cathode in a trough, they are arranged in a circle and made to revolve over a mercury cathode contained in a circular dish, or being arranged in a circle they may be kept fixed and the dish of mercury itself, or the bottom of the dish, may be made to revolve, and the operation of charging and discharging so accomplished. The differences here introduced are twofold. First, the to and fro movement of the bells is abandoned in favour of a circular movement, or, secondly, the bells are kept fixed in a circle, and the vessel containing the mercury or its bottom is made to rotate under the circle of bells. Now I do not think that it matters for the purpose at present under consideration whether the bells are placed in a straight line or in a circle. It is true that in the one case the movement must be a to and fro movement, whereas in the other it must be a movement in a circle. What difference does it make? In the one case the bells are in a row, and are moved backwards and forwards; in the other case the two ends of the row are brought together, and the circle so formed is moved round and round. This, in my opinion, is

A DISTINCTION WITHOUT A DIFFERENCE.

You have the stationary mercury cathode in the one arrangement just as you have in the other. But the arrangement by which the movement of the bells, whether to and fro or in a circle, is entirely abandoned, and the mercury below the bells is alone made to move, presents more difficulty. Clause 1 of Dr. Kellner's claim describes the patented invention as "an apparatus for the electrolysis of metallic salts with the aid of a stationary mercury cathode," and then goes on to describe the use of a row of bells moving to and fro over the mercury. Clause 3 makes no mention of a stationary mercury cathode, but describes what is called a modification of the apparatus, consisting of the rotary movement either of the bells or of the vessel containing the mercury. Now the defendants say that Clause 3 introduces the disconformity. They say that the stationary cathode vanishes in favour of a moving cathode, and that therefore the patent is bad. Now, I have to consider what the expression "stationary mercury cathode" in the provisional specification means. Does it mean actually stationary with reference to other stationary objects, or does it mean stationary merely with reference to its containing vessel. I think, reading it as any one acquainted with the knowledge then possessed would read it—I mean acquainted with the fact that up to 1894 a flowing body of mercury flowing in its vessel as milk moves in a pan when it is stirred had been always in use—that what Dr. Kellner meant and conveyed was that the mercury was to be stationary with reference to its containing vessel. Then in the arrangement contemplated by Clause 3 of his claim does he depart from the idea of such a stationary cathode?

THE CENTRIFUGAL FORCE THEORY.

It is said he does, because it is suggested that the rotary motion of the containing vessel tends to disturb the body of mercury with reference to that vessel by the centrifugal force which the rotation imparts to the mercury. But Lord Kelvin told me, and I think he was right when he said it, that this centrifugal force would be extremely slight, and could not be said to affect the otherwise stationary character of the mercury cathode. It was further suggested that the lips of the bells would dip in the mercury, would agitate the service of the revolving mercury, and so destroy its stationary character. But this, again, I think also a small matter, not really affecting the question. These lips slide over the surface of the mercury, or the surface of the mercury slides under them without causing any substantial disturbance. Substantially, in my opinion, the stationary character of the mercury cathode is secured in the plaintiffs' apparatus, whether it is worked as described in figures 1 to 6 or in figures 7 or 8. A further disconformity, however, was relied upon, not I think very strenuously, but as it was referred to and discussed I must deal with it. It was said that Clause 4 introduced something not contemplated by the provisional specification. Clause 4 reads as follows: "In apparatus of the kind specified in the preceding claims, the arrangement of a third electrode G in the combining chamber, or in each such chamber the said electrode G, or each of them when there are more than one, forming with the mercury cathode a short circuited secondary element, for the purpose of rapidly removing the alkaline metal from the amalgam substantially as hereinbefore described with reference to and illustrated by Fig. 9." I think this claim to use with his patented apparatus a third electrode—which the defendants say is necessary if you are to make the apparatus work usefully—merely describes how best the patented apparatus may be used. It is a means by which a smaller body of water may be employed than would otherwise be required. It does not enlarge in any way the ambit of the patent, and might, without injury to the plaintiffs' rights, be struck out altogether. There remains, then, the question of infringement. Now, in my view, the question of disconformity and the question of infringement involve very much the same considerations.

ROCKING AND ROTATION—A QUESTION OF DISTINCTION.

Mr. Terrell, in the course of the case, during the cross-examination of Mr. Swinburne, admitted that, if no distinction could be drawn between the rotary movement and the to and fro movement, then there was no practical distinction between the defendants' and the plaintiffs' apparatus. Mr. Rhodin, the patentee of the invention, now owned by the defendants, describes his invention at page 2 of his specification, and it is only necessary to read it and to bear in mind what Kellner's invention is in order to detect the similarity. He says, "I employ a cylindrical vessel with a flat base and open top." This is the vessel which is to contain the mercury cathode. On the bottom of that vessel he places a number of what he calls radial ribs or projections, the object of which is to prevent the mercury from revolving; in other words, to secure a stationary mercury cathode. Having thus secured his stationary mercury cathode, he introduces into this cylindrical vessel another cylindrical vessel concentric with the first. At the bottom of the second vessel there is a series of tubes arranged in a circle with their lips just dipping into the mercury contained in the first vessel. These tubes correspond exactly with the circle of bells described in figures 7 and 8 of the plaintiffs' patent, and they serve precisely the same purpose; they contain the solution of salt which has to be operated upon, and so they form a series of decomposing chambers. This second vessel containing these tubes or bells with their lips just dipping into the stationary mercury cathode is then "slowly" rotated, so that the lips of the tubes or bells disturb the mercury as little as possible. Thus the electrolysis is performed. This seems to me to be nothing more nor less than the plaintiffs' apparatus, as described in figures 7 and 8. The defendants say that their apparatus does not introduce a stationary mercury cathode at all, and the combined action of the ribs lying under the bed of mercury at the bottom of the outer vessel and of the lips of the bells dipping into the top of the mercury and of the slow rotating movement of the inner vessel is to produce a cathode which is not stationary. I do not agree with this contention; the ribs are put into the outer vessel for the very purpose of preventing the circulation of the mercury inside its containing vessel, and as to the slight agitation or movement produced by the lips of the tubes and the rotary motion, they do not alter the real stationary character of the cathode. I think the plaintiffs are entitled to succeed, and I grant the injunction asked for.

Mr. Terrell said he did not ask for a stay as to taxation of costs. That could go on if his friend wished, but with regard to the operation of the injunction, he did ask for a stay until appeal was lodged. That had been done very often. Mr. Justice Bigham: I shall suspend the operation of the injunction until you have had an opportunity of considering your position, and have lodged your appeal. He directed the taxation of costs to proceed, and suspended the operation of the injunction pending appeal. Mr. Graham applied that the machinery should be given up or destroyed. Mr. Terrell said it merely meant that the machinery would be so altered as not to infringe. Mr. Justice Bigham]: Then I make the usual order. Mr. Graham applied for the certificate which in any other action would entitle the plaintiffs to costs as between solicitor and clients. Mr. Justice Bigham: Very well; is there anything more you want? (Laughter). Mr. Graham: No, my lord. Judgment entered for the plaintiff accordingly, with costs, and injunction against defendants granted to stay pending appeal.

CANADIAN PREFERENTIAL TARIFF.

THE following information has been forwarded to us by the High Commissioner for Canada:—

By an Act of the Parliament of Canada, assented to on the 13th of June, 1898, it is provided:—"1. That all articles, except wines, malt liquors, spirits, spirituous liquors, liquid medicines, and articles containing alcohol; tobacco, cigars, and cigarettes which are the growth, produce, or manufacture of any of the following countries, and which are declared to be dutiable upon importation into Canada, may, when imported direct into Canada from any of such countries, be entered for duty or taken out of warehouse for consumption in Canada, on and after the first day of August, 1898, at a reduction of one-fourth from the general tariff rates of duty."

The preferential tariff will apply to the United Kingdom, Bermuda, the British West Indies, British Guiana, British India, Ceylon, New South Wales, and the Straits Settlements. It may also be extended by Order in Council to any other British Colony or possession, the customs tariff of which on the whole is as favourable to Canada as the British preferential tariff of Canada is to such colony or possession.

Raw sugar, including sugar drainings or pumpings drained in transit, melado or concentrated melado, tank bottoms and sugar concrete, the produce of any British colony or possession, may be entered for duty or taken out of warehouse for consumption in Canada at the reduced rate of duty provided in the British preferential tariff.

The reduction under the preferential tariff will only apply to refined sugars when evidence satisfactory to the Minister of Customs is furnished that such refined sugar has been manufactured wholly from raw sugar produced in the British Colonies or possessions.

Copies of the "Memorandum of Information and Instructions respecting the British Preferential Tariff," issued by the Canadian Customs Department, of the "Regulations for the entry of goods under the British Preferential Tariff of Canada," and of the "Schedule of forms" that are to be used, as referred to in the regulations, may be obtained from the High Commissioner for Canada, 17, Victoria-street, London, S.W., or from any of the Canadian Government agents in the United Kingdom as follows:—Mr. A. F. Jury, 15, Water-street, Liverpool; Mr. R. C. Devlin, 14, Westmoreland-street, Dublin; Mr. H. M. Murray, 52, St. Enoch-square, Glasgow; and Mr. W. L. Griffith, 10, The Walk, Cardiff.

Parliamentary Jottings.

CHEMICAL INDUSTRY AND THE PATENT LAWS.

In the House of Commons last week Mr. Cawley drew attention to the state and administration of the patent laws, especially with regard to the manufacture of aniline colours, &c., stating that they were such as to seriously handicap the trade of this country. Mr. Levinstein, a manufacturer in his constituency, applied for a licence for a patent granted to a German firm, who could not get it in their own country. It had not been put into operation for nine years, yet when his constituent wanted to use it the German firm said that they did not care to have a licence in England, and that they worked the patent in England themselves. The latter statement was proved to be absolutely incorrect. Then they said that if they must supply his constituent with the material, they must have an enormous price. The only thing left for his constituent was to apply to the Board of Trade, and that Board appointed a referee to see whether the application was valid. The application had now been found by the Board to be a good one, but this action had cost his constituent £1,800. He wished to know from the President of the Board of Trade whether everyone who wanted to work a patent granted in this country to a foreigner which had been refused to him in Germany had to go to that enormous expense before he could get a licence to make the article in England. If so, then it became absolutely prohibitive. Many small manufacturers in England were trying to get into the manufacture of aniline colours. At present we had to export the material to Germany, and manufactured colours were returned of the value of something like £2,000,000, a year. The Germans had, in fact, a practical monopoly of this trade, to such an extent that three firms in Germany employed about 12,000 persons, and nine firms had a capital of £3,000,000, with a market value of £11,000,000. This was a matter of the greatest importance to the English manufacturing community, but the patent laws and their administration by the Board of Trade prevented the development of the industry here. He urged that a change should be made so as to encourage British industry.

Captain Phillpotts endorsed the remarks of the hon. member. The patent laws were in a most unsatisfactory condition, and trade was seriously impaired. Patents were given in this country for inventions and discoveries that would never be granted either in any other European country or in America. The uncertainty of the law was so great that few ventured to appeal to set aside any patent granted to a foreigner.

Mr. Bryce, referring to the patent laws, said he agreed with Mr. Cawley that the state of these laws constituted a grievance, but it was much easier to point out a grievance than to apply a remedy.

Mr. Ritchie, replying, said the question of patents had been dealt with, and Mr. Bryce had saved him some trouble in this matter by pointing out the great difficulty and perplexity of the patent law, and the difficulty of dealing with it. The hon. gentleman (Mr. Cawley) attacked the patent law because he said we granted patents in this country to foreigners which were not given in their own country. That was our system of free trade in patents, and he (Mr. Ritchie) thought there was a good deal to be said for free trade in patents. We did not inquire of anyone who came forward and asked for a patent in this country whether he had been refused a patent in his own country. If it was no novelty here the patent would not stand. Section 22 of the Act gave power to insist upon a licence being granted where a foreign patentee or a native patentee did not work a patent. That power had been applied for, and had in two cases been granted. No doubt the process was not a cheap one, but where valuable patent rights were in question one could hardly blame those who had to defend those rights for defending them in the strongest way they could.

THE PETROLEUM REPORT.

The Home Secretary, replying to Mr. Ascroft, said it was quite impossible to introduce a Bill this session dealing with the raising of the flash-point of petroleum, as the report of the Committee had not yet been circulated, and he must have some time to take it into consideration. (Hear, hear).

Mr. Ascroft: May I ask whether the Government will give facilities for a private member to introduce such a Bill if its operation is limited to twelve months?

The Home Secretary: No, sir.

PHOSPHORUS POISONING.

On Tuesday, Mr. O'Brien (Kilkenny) asked the Secretary of State for the Home Department whether he was aware that in the match factories of Messrs Patterson and Co. and the other safety-match factories of Ireland there had not been a single case of phosphorus poisoning; and whether, with the view of procuring the best information to enable him to devise means to prevent phosphorus poisoning in Messrs. Bryant and May's, he would call for a report from factories in Ireland, as was done in regard to French factories, as to the excellent way in which Irish match factories were conducted without danger to the health of the *employés*, and invite suggestions from Mr. W. J. Neely on the best way of preventing phosphorus poisoning in English match factories

Sir M. W. Ridley (Lancashire, Blackpool): So far as I am aware there has been no phosphorus poisoning in the manufacture of safety matches in Ireland or anywhere else, as the dangerous kinds of phosphorus are not used. Cases of necrosis have, however, occurred at the works of the firm mentioned. The gentleman referred to in the second paragraph of the question, who is the junior inspector attached to the Dublin district, has already reported specially on the match factories in that district.

Sir C. Dilke (Gloucester, Forest of Dean), asked the Secretary of State for the Home Department whether, as 12 of the 13 cases of phosphorus poisoning reported for June, 1898, were cases certified as having occurred at Bryant and May's during the year 1893 to 1898, first reported by the firm in June, and the 13th was a case which did not occur at a lucifer match factory, no entry had been made of the case of Robins at Moreland's match works, at Gloucester, in which Messrs. Moreland were fined for having neglected to send notice to the certifying surgeon; and whether any cases had been reported from Moreland's since section 29 of the Factory Act of 1895 came into operation.

Sir M. W. Ridley: The list in the *Labour Gazette* is a list of reported cases. Robins's case, which occurred in December last, was not reported, and the firm were prosecuted on that account. I have particulars of five other unreported cases at Moreland's works since the beginning of 1896, but in none was prosecution possible owing to the limit of time fixed by statute.

REPORT OF THE PETROLEUM COMMITTEE.

THE report from the Select Committee on Petroleum was published on Tuesday. In the fifty-three sittings the Committee have examined eighty-five witnesses. The practical object of the Committee was to find out the utility of the old Acts relating to the supply of petroleum and to test their power of preventing loss of life by accidents. By the present law petroleum is divided into petroleum spirit, which has a flash point less than 73 degrees Fahr., and petroleum oil, the flash point of which is over 73 degrees (the Abel test). Much evidence, says the report, has been given to the effect that very few accidents have occurred in the storage and handling of petroleum oil, and that petroleum oil if handled with ordinary care is a perfectly safe article. The Committee recommend that a Bill be brought in to remedy the defects in the existing law, and in order to effect this it will be necessary to raise the dividing line between petroleum spirit and petroleum oil to 100 degrees, and to issue licences for the supply and sale of petroleum.

SIR HENRY ROSCOE'S VIEWS.

The Committee state that in their opinion the stringent regulations applied to petroleum spirit if applied to petroleum under 100 degrees would practically have the effect of preventing the use of such petroleum for domestic purposes. Sir Henry Roscoe, while strongly advocating the raising of the present flash point of 73 degrees for the purpose of storing and handling petroleum, is equally strong in his opinion that there should be no prohibition of the use for illuminating purposes of low flash points. "It is in my opinion" he states, "perfectly impossible to legislate to the effect that nobody shall burn an oil in any lamp of any kind which has a flash point below a certain temperature, for instance, in the streets they burn ordinary naphtha." Some interesting figures accompany the report as to the quantity of petroleum provided for use in the United Kingdom in 1895. From America we received 2,774,624 barrels containing 116,534,208 gallons of oil. From Russia we had 567,112 barrels containing 23,818,704 gallons, while the Scottish oil was estimated at 20,000,000 gallons, making a total of 160,352,912 gallons, and of this only a small proportion was of a flash point above 100 degrees, the percentage of oil below 100 degrees being no less than 78½ per cent. of the total supply.

Reports of Companies.

PACIFIC BORAX AND REDWOOD'S CHEMICAL WORKS, LIMITED.

Sir Alexander Wilson presided last week at Winchester-house over the third ordinary general meeting. In moving the adoption of the report, and the payment of a final dividend of 14s. per share on the ordinary shares, making 10 per cent. for the year, the chairman said he felt sure that they would regard the profit of £88,371. as very satisfactory, being, as it was, an increase of 50 per cent. on that of last year. In the main, their increased prosperity was owing to the remarkable expansion in the volume of their business, coupled with a material reduction in the cost price of their products. Nor did he despair of being able next year to show an increased outturn, which, with improved machinery and additional facilities, would enable them still further to lower the cost. In this connection he might mention that the railroad to their mines would be running in a few days, and this would cause a great decrease in the cost of conveying their crude material from the mines to the main line. A further very substantial improvement was the refinery in course of construction at Bayonne, New Jersey. They were advised that the building would be fully completed and the machinery installed and ready for work by the end of August. An issue of £150,000. of second mortgage debentures was made early last April, and the proceeds had been devoted partly towards the new refinery and partly in the acquisition of new deposits and works. The company would thus be put in a still stronger position than before, as this investment had removed a formidable competitor and had secured to the company the co-operation of certain other refiners. With respect to the future, all the indications pointed to a continued increase in the demand for borax and in the number of industrial purposes to which borax and its allied compounds were applied; and he had every confidence that the results of the current year's working would be as satisfactory as those of the past year. With regard to the uses of borax and boracic acid, it was perhaps as well for him to remove some misapprehension which appeared to exist as to the direction in which they had an outlet for these produces. They were used commercially in many industries and in very large quantities, but considerable attention had lately been called to the use of boracic acid as a food preservative, and in one or two countries there had been prosecutions for the use of this material for such purposes, and in one or two cases small fines had been inflicted. These convictions, however, were based on a misapprehension of fact, and in a recent case at Pontypridd steps were taken to procure proper medical evidence. Dr. Bell, of Glasgow, Dr. Bond of Westminster Hospital, and Professor Attfield each gave strong evidence in favour of the use of boracic acid as a perfectly harmless food preservative, and under that evidence a conviction was refused. The presiding magistrate stated that he would not have convicted in the previous cases had he had such conclusive scientific evidence as to the harmlessness of boracic acid when used for food preservation in reasonable quantity. The quantity of the company's refined material that was used for this purpose was only a small proportion of their manufacture, but it was satisfactory that this branch although not one of great importance, was not likely to be seriously attacked. Mr. E. J. Halsey seconded the motion. Surgeon-General de Renzy congratulated the directors on the report and testified to the completely innocuous character of boracic acid, which he himself used about 20 years ago in India as a preservative of meat. The motion was unanimously adopted.

ANGLO-SICILIAN SULPHUR CO., LTD.

An extraordinary general meeting of the Anglo-Sicilian Sulphur Company, Limited, was held on Tuesday, at Winchester-house, Old Broad-street, E.C., under the presidency of Mr. W. T. Brand (the chairman of the company).

The Chairman said: As you are aware, this meeting is called for the purpose of altering the articles—principally Clause 12 in our Articles of Association; but there are certain other small alterations to be made in order to comply with the rules and regulations of the Stock Exchange, so that we may be able to get a settlement. Under Clause 12 as it stands the preference shareholders, who found, or were liable to find, £700,000. against the ordinary shareholders, who found £35,000, would have the power of winding up the company at the end of the first five years, which is the time when we have the power to renew our contracts in Sicily or otherwise as we please. It was thought not fair that the people who found, or who were liable to find, the £700,000. should be obliged to enter into a company which they might think would not be successful. The Committee of the Stock Exchange thought the power in this matter was not sufficiently clear, and that it was not imperative on the directors to call a meeting of the shareholders, and that this might not be quite fair to the ordinary shareholders. Therefore, we propose to cancel the present clause and insert the one appearing in the notice calling the meeting, which, perhaps, is fairer to all concerned. As regards the other small alterations I think there is nothing to be said. You understand that the preference shareholders have distinctly the power at the end of the five years to wind up the company unless the ordinary shareholders choose to come forward and buy them out. I think it is a fair clause, because it is only right that those who found the bulk of the money should have the full control of the company's affairs.

In reply to shareholders, the chairman said the company had the right to renew the Sicilian contracts for five years—making ten in all—on the same terms. With regard to the English contracts there was no such power, but in the present condition of the company he thought those who made them would be only too pleased to renew them. With regard to the general position of the company, their financial year only ended on July 31st, but he might tell them that they had had a very satisfactory year. The production of sulphur had increased considerably, but so, he was glad to say, had the consumption, and undoubtedly the past year had been a very successful one for the company. He then formally proposed a resolution embodying alterations in the articles of association, which was adopted.

A Shareholder asked when it was proposed to hold the general meeting?

The Chairman said it would be held about the end of September or the beginning of October. It took some time to get the accounts home from Sicily. He added that a meeting would have to be called to confirm the resolution just passed, and of this due notice would be given. The proceedings then terminated.

DIVIDENDS.

LEVINSTEIN, LTD.—At the annual meeting of shareholders of this company last week a dividend on the ordinary shares at the rate of 6 per cent. per annum for the half year ended 31st May last was adopted, making, with the interim dividend paid in December last, 8 per cent per annum.

BOWMAN, THOMPSON, AND CO., LTD.—The directors of Bowman, Thompson, and Co., Limited, have decided to pay interim dividends for the six months ended June 30, at the rate of 7 per cent. per annum on the preference shares, and 7½ per cent. per annum on the ordinary shares.

Selected Correspondence.

ALUMINIUM.

(To the Editor of the Sheffield Telegraph).

SIR,—The work of compressing remarks at discussions of technical papers is so often out of proportion to their value for general readers, that I would not trouble you in regard to those I made on the subject of aluminium, and reported in your issue of to-day, in connection with the meeting of the Institution of Mechanical Engineers, were it not that the subject is of special interest to Sheffield in every one of its bearings. Sir William White's remarks also suggested a point of extreme value relating to the matter.

I stated that the use of aluminium for the manufacture of surgical instruments would seem to be barred by the frequently-reported statement that a very small proportion of mercury, or even of corrosive sublimate, will destroy aluminium by forming an amalgam with the mercury. Although mercury is not a metal that one comes into constant contact with, yet its use is extending, and I instanced the case of the electrolytic manufacture of soda to show this.

Sir William White, however, in referring to the use of aluminium for shipbuilding purposes, mentioned paints that contained lead, and which might have been used to protect the metal from corrosion. Now, when it is known that some anti-fouling paints contain mercury as one of their ingredients, the importance of the phenomenon indicated is immensely increased. It is clear that if such a paint were used on an aluminium surface it would simply be to consign the metal to quick destruction.

All this in no way detracts from the value of aluminium when properly employed, and its best friends, I think, will be those who show how to prevent its use so as to court failure.—Yours truly,

F. J. R. CARULLA.

SAFE PETROLEUM—A MILLION GALLONS.—The steamer *Baku Standard*, one of the largest tank steamers afloat, is due at the Anglo-Caucasian Oil Company's wharf at Eccles, on Monday next. She has on board nearly 1,500,000 gallons of oil, which is a record cargo for Manchester. This oil is the "Testefas" (safe test) brand, and has been specially manufactured to comply with the recommendation of the Select Committee on petroleum, which fixes the flash point at 100 degrees F. Abel test.

THE MANUFACTURE OF MATCHES.

DR. OLIVER'S REPORT.

THE report is issued as a Parliamentary paper of a visit of inspection made to French matchworks at Aubervilliers, Pantin, and Marseilles during June by Dr. Thomas Oliver, of Newcastle, one of the experts appointed by the Home Secretary to inquire into the matter of lead poisoning in the Potteries and also into the dangers incidental to lucifer match making. Dr. Oliver, after mentioning the fact that the manufacture of matches in France is a State monopoly under the direction of the Minister of Finance, first describes the works at Aubervilliers, situated outside the fortifications of Paris. The works are old and do not fulfil modern requirements. Only the ordinary wooden or splint matches are manufactured there, and these are made from the so-called white or yellow phosphorus. At Pantin, also situated outside Paris, the works are not so old, and are kept better. The factories there give employment to 400 women and 200 men, and three kinds of matches are made.

The following are Dr. Oliver's general impressions and deductions:—

1. Until recently the match-makers in certain of the French factories suffered severely from phosphorus poisoning; that at the present time there is apparently a reduction in the severer forms of the illness.

2. That the reduction in the amount of illness is attributable to greater care exercised in the selection of the workpeople; raising the age of their admission into the factory; medical examination on entrance; subsequent close supervision; repeated dental examination; personal cleanliness on the part of the workers; early suspension on the appearance of symptoms of ill-health; improved methods of manufacture.

3. That the French Government, aware of the dangers of match-making, is furthering by all possible means new methods of manufacture, and, with this object in view, retains in its service chemists and inventors who are continually making experiments.

4. That the Government has to some extent already succeeded in manufacturing a match capable of striking anywhere, yet free from white phosphorus, but that until now the manufacture of this match is not an industry.

In presenting his report to the Home Secretary, Dr. Oliver acknowledges the prompt assistance he received from various officials of the French Government, and the help extended to him by the British Ambassador in Paris, through whose offices he obtained from M. Cochery, the then Minister of Finance, an *entrée* to the various factories, and by Mr. Lee and Mr. Boothby, of the Embassy.

Trade Notes.

Owens College Students' Bazaar.—The Whitworth legatees have recently presented to the College a large plot of land in Fallowfield, for the purpose of laying it out for an Athletic Ground. A sum of £3,000. is required to put the ground in a fit condition and also for building a suitable Pavilion upon it. To raise the necessary funds the Owens College students have resolved to hold a bazaar in the St. James' Hall, on December 15th, 16th, and 17th. One of the stalls, to be called the Chemical Stall, has been alloted to the students in chemistry, and a Stall Committee has been formed under the presidency of Mrs. Ivan Levinstein, supported by Mrs. Dixon and Mrs. Perkin. In order to make this stall representative and successful, contributions to the chemical stall of money, work, or such saleable articles as may be classified as chemical or allied products will be gratefully received by Mrs. Ivan Levinstein, Hawkesmoor, Fallowfield; by Mrs. Dixon, Birch Hall, Rusholme; or by Mrs. Perkin, Fair View, Fallowfield.

Depression in Cheshire Salt Trade.—The official returns of the Cheshire salt trade, just issued, show a rather serious depression during July. The exports and coastwise shipments reached 55,000 tons, compared with nearly 73,000 last year. Liverpool alone has fallen off to the extent of 10,000 tons, and Runcorn and the Manchester Ship Canal show a reduction of almost 8,000 tons. The year's grand total to date is 376,000 tons, against 380,000 tons in 1897.

Acetylene Gas in Manchester.—A number of gentlemen, some of whom are connected with public bodies, met at the Free Trade Hall last week to witness an experiment in lighting by acetylene gas. Lamps had been fitted up in the verandah of the hall by the Manchester Acetylene Gas and Carbide Company, and these were lighted from a small generator fixed in the corner of the verandah. The light seemed to give general satisfaction, and it certainly compared very well with neighbouring electric and coal-gas lights. The acetylene gas is in use at the docks for movable lights, and in at least one place—Portsoy, in Banffshire—it has superseded ordinary gas.

Another Petroleum Company.—The Petroleum Oil Trust, Limited, will shortly issue a new subsidiary company, to be known as the Gaspé (Canada) Petroleum Company, Limited. With a capital of £300,000., the enterprise will take up the sole right of erecting pipe-lines and refineries over 200 square miles of land owned by the Petroleum Oil Trust, Limited, as well as to drill and sink wells over the properties. Arrangements have been made with the Irish Proprietary Oilfields of Gaspé (Canada), Limited, and the Société Belgique des Petroles du Canada to acquire their pipe-line rights, in addition to those of the trust.

Calcium Carbide Laws.—New bye-laws, with regard to calcium carbide have been drawn up by the Commissioners for the Harbour and Docks of Leith. Subject to the sanction of the Board of Trade, the bye-laws made by the Commissioners in virtue of the Petroleum Act, 1871, shall not apply to carbide of calcium when packed and hermetically sealed in iron or tin cases, enclosed in strong wooden cases, or in air-tight and damp-proof iron drums, each case or drum containing not more than 112 lbs., and being so substantially constructed as not to be liable to become defective, except in case of gross negligence or extraordinary accident. Each case must be marked "Carbide of Calcium—dangerous if not kept dry," with a further caution as to the effects of moisture, and the full name and address of the sender.

Market Reports.

TAR AND AMMONIA PRODUCTS.

There seems to be no finality in regard to the price of benzols, the past week having brought a further decline, so that both 90's and 50/90's are now quoted 9d. to 9½d. In other products there is no change, either in price or position, creosote being about the only article which seems to have any backbone just now.

Sulphate of ammonia is quietly steady. There is a scarcity of sulphate for shipment, but the home demand can be comfortably supplied at present. Closing prompt values are:—London outside makes, £9. 11s. 3d.; Liverpool, £9. 11s. 3d; Hull, £9. 8s. 9d.; and Leith, £9. 10s. to £9. 11s. 3d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is rather a better tone, and more business is being done for America. Prices are without material change. Caustic soda has, if anything, rather a lower tendency, and current quotations f.o.b. Liverpool, 10 ton lots, are as follows: 77%, £8.; 74%, £7. 15s.; 70%, £7. 2s. 6d.; 60%, £6. 2s. 6d., nett, per ton. In bleaching powder there is rather more movement for export at £5. 10s. to £5. 15s. f.c.b. for best Lancashire and Cheshire makes—softwoods, on rails, £5. to £5. 2s. 6d. per ton. Chlorates are steady; potash at 3⅜d. and soda at 3½d. per lb. Ammonia soda 58% unchanged at £4. 2s. 6d. f.o.r. Sulphur firm at £4. 10s. to £4. 12s. 6d. at makers' works. Sulphate of copper has advanced to £16. 10s f.o.b for prompt and £17. for forward delivery. Nitrate of soda is a steady market at 7s. 4½d. per cwt. Potash, caustic and carbonate continues in good request at current rates. Prussiate of potash rather lower at 6½d. and soda at 5⅜d. per lb. Cyanide 1s. 2d. per lb. Brown acetate of lime, £5. 2s. 6d. to £5. 5s. c i.f. U.K. ports; grey, £7. per ton. In acetate of soda there is more business doing at £11. 15s. to £12. 0s. per ton. Borax unchanged at £12. 10s. f.o.r. Bichromates steady at the reduced quotations. Aniline oil and salt are firm, but without improvement in price. Ammonia salts all round are quiet. White powdered arsenic is moving more freely at £14. 15s. to £15. f.o.r. Lancashire—London. Green copperas in good request. White sugar of lead dull at £26. c.i.f.; brown, £18. c.i.f. Nitrate of lead, £20. per ton. Oxalic acid dull at 3d. to 3¼d. per lb. Generally trade is reported quiet in all districts.

REPORT ON MANURE MATERIAL.

The market during the past week has, owing to the intervention of holidays, been very quiet.

High grade phosphates continue to be enquired for on the Continent for 1899 shipment, and it is stated that further business has been done at the higher prices lately realised. For U.K., sellers could not now undertake new business earlier than for shipment summer 1899, and for such full prices would have to be paid. The quotations for South Carolina and similar grade Algerian phosphate remain unchanged at 6d. to 6¼d. per unit, next year's shipment.

A parcel of Brazil bones was sold at auction, realizing from £4. to £4. 1s. 3d. per ton, ex quay. There is at present very little doing in East Indian bone meal, prices asked by shippers (£4. 10s. per ton, ex quay) precluding business.

Nitrate of soda is firm on spot at 7s. 7½d. per cwt. ex quay, for fine quality.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 46s. 5½d.; Middlesbro', 40s. 9d cash; and hematite, 51s. 8d. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed at £50. 2s. 6d. to £50. 7s. 6d. cash, and £50. 8s. 9d. to £50. 13s. 9d. three months. Tin firm: Straits closed at £72. os. od. to £72. 10s. od. cash, and £72. 7s 6d. to £72. 17s. 6d. three months; Australian, £72. 13s. 9d.; English ingots, £74. 10s. od. to £75. os. od. Lead quiet: Spanish, £12. 12s. 6d. to £12. 13s. 9d., English, £12. 17s. 6d; Silesian spelter, ordinary, £20. os. od. buyers. Nickel, 1s. 2½d. Antimony, £36. 10s. to £37. 10s. Quicksilver: First hands, £7. 12s 6d.; second hands, £7. 12s. *Copper shares* steady: Cape, 4⅝ to 4¼; Copiapo, 2$\frac{5}{16}$ to 2$\frac{7}{16}$; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅜ to 3⅞; Rio Tinto, 28$\frac{5}{16}$ to 28$\frac{7}{16}$; Tharsis, 6½ to 6¾.

GLASGOW, Wednesday.—Market inactive, and a small business. Scotch done at 46s. 6d. cash, and 46s. 9d. to 46s. 8d. month; buyers, 46s. 5½d. cash, sellers, 46s. 6d. Cleveland done at 40s. 9½d. cash, buyers, 40s. 9d.; sellers, 40s. 9½d. cash. Cumberland hematite done at 51s. 8d. cash; buyers, 51s. 8d. cash; sellers, ½d. more. Middlesbrough hematite, buyers, 41s. 3d. cash; sellers 41s. 6d.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is steady and prices well maintained. Lagos has been sold at £21 transit. Olive is firm, and for certain qualities of Spanish it is possible to obtain higher prices. Linseed keeps steady, with sellers asking 18s. to 18s. 6d. per cwt. Liverpool makes in export casks. Cottonseed is quiet but steady, with Liverpool refined quoted 15s. 9d. to 16s. 3d. per cwt. Castor oil is firm, and there is nothing offering below the following figures:—Good seconds Calcutta, 3$\frac{13}{16}$d. to 3¼d., first pressure French, 3d., and Madras, 3d. to 3$\frac{1}{16}$d. per lb. Tallow is firm and all offerings are fetching full prices. Resin is far from brisk, although so far prices are well maintained at recent values. Turpentine is firm at 22s. 6d per cwt., with a fair demand thereat. Petroleum slow of sale, with American at 5⅞d. to 7¼d., and Russian refined, 5d. per gallon.

CAKES.—Previous prices are still quoted for American Western linseed, but business in spot parcels has been on only a very moderate scale to-day owing to the holidays, the value being unchanged at £5. 13s. 9d. to £6. 2s. 6d.; for Liverpool makes there are sellers at £7. to £8. per ton according to brand, and there has been rather more inquiry experienced at the reduced level. For American decorticated cottonseed the demand has been quiet, but sellers still quote £5. 5s. to £5. 17s. 6d., whilst Liverpool makes are now quoted £5. 15s. to £6. 10s. per ton, with moderate sales thereat. Undecorticated Liverpool makes are also the turn against sellers at £3. 15s. to £4. 10s., but meet rather a better inquiry from consumers. There is an absence of demand for spot parcels of Egyptian at the moment, but the quotation remains unchanged at £3. 12s. 6d. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The situation after the holiday opens very quiet upon a market which was almost lifeless previously; everyone, however, looks forward in anticipation of better things later on. Imports continue very unsatisfactory, amongst the principal of which are the following: Wheat, 1,626,450 qrs. against 1,349,718 qrs.; flour, 135,627 cwt. against 195,733 cwt., which is indicative of a healthier situation in the corn-grinding trade than the seed-crushing industry. Linseed, 211,352 qrs. against 354,780 qrs.; cottonseed, 116,751 tons against 120,676 tons; rapeseed, 42,285 qrs. against 55,489 qrs.; oilcakes, 8,506 tons against 6,945 tons; olive oil, 4,146 tuns against 3,238 tuns. Linseed oil is quoted firmer, spot 15/6 naked; forward, August, 15/3; last four months 14/9, sellers. Boiled and refined, £1. to £1. 10s. per ton, extra. Refined cotton oil, spot, naked, 13/4½ to 13/6½ month; Nov./April, 13/3, sellers; barrels £1. 10s., and ordinary casks £1. 10s. per ton extra. Castor oil, extracted here, first pressure, £28 per ton in barrels, 3$\frac{13}{16}$d. per lb. in cases; second pressure, £27. in barrels, 3$\frac{3}{16}$d. per lb. in cases. Resins unchanged. Olive oil and olive oil soaps unchanged; cod oils, £17. to £19. per ton. Choicest Danish butter, 87s. per cwt.; Swedish, 87s.; Dutch, 84s.; Canadian, 82s. per cwt.

CAKES.—The Driffield Pure Cake Co., Ltd., declare a dividend of £4. per cent. upon their original shares. Linseed cakes are firm, 95% pure, £7. to £7. 2s 6d. Oilcakes (linseed), £6. 2s. 6d. to £6. 5s.; Russians dearer at £6. 15s. to £6 17s. 6d. Cotton cakes steady—best makes, £3. 17s. 6d. to £3. 18s. 9d.; seconds, £3. 13s. 9d. to £3. 15s. per ton. Decorticated £6. 2s. 6d. Rape cakes unchanged.

PAINTS.—Paint manufacturers and all trades akin continue well employed; prices change but little, and are largely dependent upon maker's reputation. Ready mixed paints, in tins, from £24. per ton. Ordinary colours in oil, £11. per ton. Dry minerals colours from £3. 10s. to £8. per ton. Oak varnish from 5/6 per gallon; black varnish, £5. 10s. per ton. Disinfecting powder, 5% carbolic, £3.; 10%, £3. 10s.; 15%, £4; 20%, £4s. 10s. per ton. Sanitary fluid, from 10d. per gallon.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

Almost immediately after the despatch of last week's notes, sulphate of ammonia took a sudden mount, consequent upon demands for the end-of-the-month engagements. Spot Leith price was run up to £9. 12s. 6d. and done at that in a few instances, being the highest mark touched since February last. One or two forward lots were done at about £9. 10s. The market is now quite idle again, and the price is giving way, though but reluctantly. Spot Leith may be done at £9. 10s., perhaps a fraction under that, and there is nothing moving as regards forward. Bichromate of potash and bichromate of soda have been lowered one farthing per lb. by the Scotch makers, the moving cause in this, as of old, being the efficiency of the foreign competition. In mineral oils and paraffins there is no change to report, but makers will be in conference almost directly, regarding the position of burning oil for the winter.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett Tyne, soda ash, 48/52°, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, 48/52°, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 10s. to £5. nett, Glasgow; caustic soda, white, 74° £7. 17s. 6d., 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s. od. nett, Tyne; saltcake, 25s. od.; borax, English refined, £14., and boracic acid, £24. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d, and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d less 5%, Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £9. 10s. od. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £16. 7s. 6d. less 5% Liverpool; paraffin scale, hard, 1⅜d. to 1½d. per lb., soft, 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb.; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 5¾d., and crystal, 6d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. os., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were nil.

TYNE CHEMICAL REPORT.

Tuesday.

There is little change to report in the state of the chemical trade. Sulphur still continues scarce at £5. per ton nett. Soda crystals are in fair demand at £2. 12s. 6d. per ton, gross weight, for local consumption. Caustic soda, £7. 5s. to £7. 10s. per ton for 70%; 76/77%, £8. 5s. to £8. 10s. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett; do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8. 10s. and 70% £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. os. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d, per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

Salt continues firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The demand continues very strong, and prices are firm. Best Northumbrian steam is 13s. 6d. per ton f.o.b., and small steam is 6s. per ton. Coke also continues steady.

New Companies.

Orr's Zinc White, Ltd.—Capital £40,000, in £1 shares. This company has been formed to acquire and carry on the business of manufacturers of and dealers in sulphide of zinc (Orr's Zinc White), carried on in London by John B. Orr, and in Widnes, Lancs, by Thomas Kenyon, as The Vine Chemical Co. The subscribers are:—F. C. Lingard, Cumberland House, Wallington, solicitor; R. J. Robinson, 21, Honley-road, Catford, agent; A. Bryson, Blantyre, Westcombe Park, S.E., clerk; W. A. Henderson, 11, Queen Victoria-street, E.C., chartered accountant; J. B. Orr, 11, Queen Victoria-street, E.C.; J. E. Preston, 8, Burton-road, S.W., engineer; G. V. Simmons, 4, Gainsborough Villas, Leytonstone, gentleman.

Wenlock Electrolytic Co., Ltd.—Capital £120,000, in £1 shares. This company has been formed to adopt an agreement with the Wednesfield Chemical Synd., Ltd., to acquire, own, and work electrical patents, and to carry on the business of chemical and manure manufacturers, distillers, dye makers, gas makers, metallurgists, etc. The subscribers to the memorandum of association are:—A. Saville-Cohen, 129, Highbury New Park, N., gentleman; E. T. Church, 48, Geneva-road, Brixton, clerk; A. Jones, 166, Maygrove-road, W. Hampstead, gentleman; J. M. Lickfold, 33, Brunswick-square, W.C., journalist; E. Wyatt, Lausanne-road, Hornsey, gentleman; H. W. Brown, 79, High-street, Beckenham, gentleman; H. Spinks, 59, Church-road, Homerton, N.E., clerk.

Thomas Tyrer & Co., Ltd.—This company has been formed and registered with a capital of £35,000, consisting of £25,000, in 5 per cent. cumulative preference shares and £10,000, in ordinary shares, to take over the business hitherto carried on by Mr. Thomas Tyrer under the style of Thomas Tyrer and Company at the Stirling Chemical Works, Stratford, Essex, and to engage in the business of manufacturing pharmaceutical and operative chemists. The liabilities and assets of the old firm are taken over by the company as from March 31st, 1898. The signatories to the memorandum and articles of association are:—Ludwig Mond, 20, Avenue-road, N.W., chemical manufacturer; Charles Dreyfus, 286, Dickenson-road, Manchester, chemical manufacturer; Thomas Tyrer, Stirling Chemical Works, Stratford, chemical manufacturer; Charles Thomas Tyrer, Stirling Chemical Works, Stratford, chemical manufacturer; Arthur Boake, High Standing, Loughton, manufacturing chemist; Charles Wightman, 1, Fenchurch Avenue, E.C., merchant; Alfred Gordon Salamon, 1, Fenchurch Avenue, E.C., consulting chemist. The services of Mr. Thomas Tyrer have been engaged as managing director, and he will be assisted by the same staff as hitherto.

Gazette Notices.

PARTNERSHIP DISSOLVED.

G. Fortescue and H. Forth, under the style of George Fortescue, soap manufacturers, Bulwell, Nottingham.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 23rd.

Acetate of Lime—
U. States, 488 bgs. Gillespie Brs. & Co.
,, 476 H. Wallace & Co.

Acetic Acid—
Holland, 59 pks. A. & M. Zimmermann
France, 1 White Brs.

Acetone—
Austria, 8 drs. D. T. Domeier & Co., Ltd.
Germany, 1 T. H. Lee

Alkali—
Belgium, 400 c. C. Lamb & Co.

Alum—
Germany, 34 cks. R. W. Greeff & Co.
,, 10 pks. Butler's Wf., Ld.

Ammonium Chloride—
Holland, 25 cks. H. Lorenz

Antimony Ore—
Straits, 511 t, Watson's Wf., Ld.
,, 20 L. & I. D. Jt. Co.
China, 103 Watson's Wf., Ld.

Arsenic—
France, £25 J. Harrison
Portugal, 115 brls. Coverley & Westray
Germany, 2 cks. J. Barber & Co.

Asbestos—
France, £12 Girard Brs. & Co.

Barium Chloride—
Germany, 23 cks. Petri Brs.

Barytes—
Belgium, 337 pks. J. L. Lyon
35 cks. & Co.
Holland, 89 Taylor Brs.
,, 40 W. Harrison & Co.
Germany, 44 Robertson, Selley & Co.
Belgium, 100 bgs. W. Harrison & Co.
Germany, 105 W. T. Henley's Tel. Wks. Co.

Bleaching Powder—
France, 18 cks. J. M. Steel & Co.

Bleaching Soda—
Germany, 140 c. H. Lambert

Bones—
Adelaide, 6 t Anning & Cobb
N. Zealand, 2 Flack, Chandler & Co.
Adelaide, 1 Goad, Rigg & Co.
Sydney, 3 ,,

Caoutchouc—
Rangoon, 6 c. Prop. Hay's Wf.
France, 20 Major & Field
Holland, 14 Lewis & Peat
Straits, 336 Prop. Bull Wf.
Rangoon, 214 L. & I. D. Jt. Co.
Germany, 42 Butler's Wf., Ld.
France, 80 Girard Brs. & Co.
Straits, 237 L. & I. D. Jt. Co.
Zanzibar, 30 ,,
,, 3 Hale & Son
Straits, 893 Gilman Brs & Co.
Japan, 2 J. Batt & Co.
E. Indies, 80 L. & I. D. Jt. Co.
Mozambique 15 S. Figgis & Co.
Straits, 690 Anderson, Weber & Smith

Castor Oil—
France, 28 brls. Mordaunt Bros.
,, 10 cs L. & I. D. Jt. Co
,, 5 F. Bochin
Italy, 20 Baiss Brs. & Co.

Caustic Potash—
Germany, 80 drs. J. M. Steel & Co.
France, 20 Petri Brs.

Chemicals (*otherwise undescribed*)**,**
Germany, £315 L. & I. D. Jt. Co.
,, 10 E. J. Brasch
,, 5 J. Barber & Co.
France, 6 Burnett Brs. & Sons
Holland, 44 97 cs. T. H. Lee
,, 20 Hernu, Peron & Co.
Belgium, 210 T. Palmer
Sweden, 10 M. D. Co.
Denmark, 104 Crosse & Blackwell
Holland, 10 Page, Son & East
Germany, 513 A. & M. Zimmermann
Belgium, 70 T. H. Lee
,, 5 John Cockerill Line
France, 9 Mory & Co.
Germany, 5 Phillipps & Graves
Holland, 20 R. W. Greeff & Co.

Citric Acid—
France, 4 pks. Burgoyne & Co.

Cream of Tartar—
Portugal, 10 pks. B. & F. Wf. Co.
France, 10 W. C. Bacon & Co.
Italy, 12 Fellows, Morton & Co.
France, 5 F. C. Devon & Co.
,, 7 C. Atkins & Nisbet
,, 5 M. Ashby, Ld.
,, 17 J. Barber & Co.
Spain, 5 W. C. Bacon & Co.
France, 5 B. & F. Wf. Co.
,, 4 Blackmore, Leconte & Co.
,, 5 J. W. Cook & Co.

Dyestuffs—
Argols
Italy, 224 pks. Thames S. T. & L. Co.
,, 352 B. Jacob & Sons
Spain, 5 J. Grusse & Co.

Dyestuffs (*otherwise undes.*)**—**
Cochineal
Canaries, 4 pks. Sperling & Williams
,, 13 bgs. Swanston & Co.
,, 24 bgs. Kulmer, Henderson, & Co.
Cutch
Rangoon, 200 bxs. Hoare, Wilson & Co.
,, 150 bxs. A. Howden & Co.
,, 150 brls. L. & I. D. Jt. Co.
Extracts
France, 13 pks. S. Bennett S. S. Co
,, 20 cks. ,,
,, 200 T. H. Lee
,, 20 Bailey & Leetham, Ltd.
,, 10 cks. J. Harrison
Holland, 1 Powell, Jones, & Co
Austria, 200 brls. Boutcher, Mortimore & Co.
France, 115 pks. L. J. Levenstein & Co.
Denmark, 2 M. D. Co.
Austria, 34 Hoare, Wilson & Co.
France, 10 B. & F. Wf. Co.
Gambier
Straits, 854 bgs. Beresford & Co.
,, 472 brls. Brinkman & Co.
Indigo
E. Indies, 6 chts. Croysdale & Co.
,, 20 Parsons & Keith
,, 4 L. & I. D. Jt. Co.
Logwood
W. Indies, 40 t. S. Dobree & Sons
Madder
Holland, 5 pks. T. H. Lee
Shumac
Italy, 50 pks. Carter, Paterson, & Co.
,, 70 A. Hartrodt
,, 28 bgs. Hicks, Nash, & Co.
,, 817 J. Kitchin, Ld.
Spain, 127 pks. H. Gale, Ld.
Tanners' Bark
Adelaide, 55 t. A. & W. Nesbitt
Natal, 31 Boutcher, Mortimore, & Co.
Adelaide, 25 H. Devitt & Co.
Natal, 224 J. T. Rennie, Sons, & Co.
Adelaide, 204 T. J. & T. Powell
Valonia
A. Turkey 30 Hicks, Nash & Co.

Dyestuffs (*otherwise undescribed*)
Natal, 80 Flack, Chandler, & Co.
S. Australia, 48 Brown & Elmslie
France, 1 pk. E. Flageollett & Co.
Adelaide, 1,163 bgs. A. & W. Nesbitt
,, 1,895 Baxter & Hoare
,, 740 J. Grieg
,, 25 t. F. Claydon & Co.
,, 55 G. R. Haller, Ld.

Farina—
Germany, 5 pks. H. Lambert
Holland, 100 bgs. G. Hornzee
Italy, 4 cks. B. P. Rocco

Glucose—
Canada, 250 pks. 250 c. Barrett, Tagant, & Co.
,, 550 550 ,, R. G. Hall & Co,
Canada 1,750 1,750 L. & I. D. Jt. Co.
,, 500 500 L. & N. W. Ry. Co.
,, 1,350 1,350 Pearce, Pelly, & Co.
Germany, 25 245 Bennett S. S. Co.
U. States, 949 5,319 R. G. Hall & Co.
Canada, 2,000 2,000 Beresford & Co.
,, 200 200 Humphrey & Co.
,, 500 502 E. Thompson & Co.
U. States, 202 1,140 W. Grose & Co.
Canada, 1,350 1,350 Beck & Pellitzer
U. States, 595 3,790 Lon. & Til. Ltge. C. & D. Co., Ld.

Glue—
Germany, £24 L. & I. D. Jt. Co.
France, 202 T. M. Duche & Sons
Belgium, 1,153 J. Barber & Co.
France 456 J. Harrison
,, 44 Prop. Hay's Wf.
Holland 50 Phillips & Graves
Germany, 31 Craven & Co.
,, 60 A. G. Robinson & Co.
,, 18 O'Hara, Matthews, & Co.
,, 76 M. D. Co.
Belgium, 12 T. Ronaldson & Co.
Germany, 16 Phillips & Graves
France, 80 Burnett, Brs. & Co.

Glue Stock—
Germany, 579 bls. W. Balchin, Ld.
,, 17 L. & I. D. Jt. Co.
,, 36 Hicks, Nash, & Co.
Adelaide, 5 Anning & Cobb
,, 84 A. & W. Nesbitt
Belgium, 100 bgs. D. C. Thomas & Sons
,, 100 R. Davies & Co.

Infusorial Earth—
Germany, £21 Snowdon, Sons, & Co.

Manure—
Germany, 50 t. Perkins & Homer
Portugal, 11 L. & I. D. Jt. Co.

Methyl Alcohol—
Germany, 12 dms. Lister & Biggs
France, 12 cks. W. Simpson & Co.
Austria, 19 Stein Brs.

Mica—
Canada, £5 M. D. Co.
E. Indies, 1,275 W. M. Smith & Sons
Ceylon, 110 E. Davis & Co.

Molasses—
Germany, 10 cks. 23 c. M. D. Co.
U. States, 441 2,447 C. S. Anderson
Holland, 400 2,000 J. R. Francis & Co.

U. States, 500 2,360 D.T. Boyd
" 150 818 Ohlenschlager Brs.
" 500 brls. 2,400 H. B. Booth

Ochre—
France, 62 cks. Ellam, Jones, & Co.
" 41 J. L. Lyon & Co.
" 54 Taylor Brs.
" 4 O'Hara & Hoare
" 405 W. Harrison & Co.

Oxalic Acid—
Norway, 30 pks. S C. D. Co.

Paraffin Scale—
U. States, 3,725 brls. Anglo-American Oil Co., Ld.

Paraffin Wax—
U. States, 100 brls. G. H. Frank

Pearl Ash—
France, 120 c. F. W. Berk & Co., Ld.

Phosphate Rock—
Holland, 410 t. West & Penrose
Belgium, 50 H. E. Albert
France, 175 A. Hunter & Co.

Pitch—
Sweden, 25 cks. R. L. Archibald

Plumbago—
Ceylon, 83 brls. J. Forsey

Potassium Bicarbonate—
Holland, 18 cks. A. & M. Zimmermann

Potassium Carbonate—
Belgium, 100 c. Petri Brs.
Germany, 100 "
" 877 J. M. Steel & Co.
France, 100 W. E. Cole

Potassium Hydrate—
Germany, 15 cs. Butler's Wf., Ld.

Potassium Oxalate—
Holland, 20 cks. R. W. Greeff & Co.

Potassium Prussiate—
Germany, 27 cks. Blagden, Waugh, & Co.

Potassium Sulphate—
Germany, 300 bgs. F. W. Berk & Co., Ld.

Rosin—
U. States, 1,000 brls. J. Knight & Sons
" 650 T. Nickels & Co.
" 150 Union Ltge. Co., Ld.
France, 3 pks. J. Barber & Co.
" 50 cks. W. Harrison & Co.
Belgium, 25 F. & S. Chiesman & Co.

Salicylic Acid—
Germany, 35 pks. Butler's Wf., Ld.

Saltpetre—
Chili, 2 cks. T. H. Lee

Soap—
Germany, £115 Phillipps & Graves

Soda Ash—
U. States, 2,500 c. F. W. Berk & Co., Ld.

Starch—
Holland, 10 pks. Phillipps & Graves
" 5 cs. "
Belgium, 240 T. H. Lee
Belgium, 200 T. Ronaldson & Co.
" 290 pks. Becker & Wagner
Canada, 300 bgs. R. G. Hall & Co.
Belgium, 786 cs. F. Claydon & Co.
France, 232 R. Lehmann & Co.
U. States, 500 C. Tennant, Sons. & Co.
Germany, 163 Phillipps & Graves
Belgium, 40 Leach & Co.
Holland, 60 Hernu, Peron, & Co.
" 990 Little & Johnston
" 640 A. Starck
France, 21 W. E. Cole
U. States, 598 J. Forsey

Stearine—
France, 100 bgs. Bennett S. S. Co.
Belgium, 28 D. C. Thomas & Sons
France, 20 Beresford & Co.
Holland, 63 H. Hill & Sons
" 11 cks. "
" 2 Phillipps & Graves
France, 11 J. Harrison
Holland, 50 bls. J. Owen

Sulphur—
Italy, 100 t. Johnson & Hooper
" 40 F. C. Devon & Co.
" 20 Taylor Brs.
" 52 J. Kitchin, Ld.
" 5 W. Slimmon
" 28 G. Boor & Co.
" 11 Union Ltge. Co.
" 17 Bremer, Bennett, & Co.

Talc—
France, £100 Brasch & Rothenstein

Tar—
N. Zealand, 150 brls. Linck, Moeller, & Co.
Germany, 100 W. Beard & Son

Tartaric Acid—
Holland, 30 pks. Kirkpatrick, Barr, & Co.
" 8 B. & F. Wf. Co.
" 22 F. C. Devon & Co.

Ultramarine—
Holland, 9 pks Phillipps & Graves

Varnish—
Germany, 9 pks. Butler's Wf., Ld.
" 1 H. Lambert
" 13 L. & N.-W. Rly. Co.
" 14 Phillipps & Graves
France, 8 Mory & Co.

Verdigris—
France, 4 cks. B. & F. Wf. Co.

White Lead—
Belgium, 41 brls. J. W. Cook & Co., Ld.
" 51 Robertson, Selley, & Co
Germany, 23 H. B. Alder & Co
Holland, 52 cks. D. Storer & Sons
" 40 Randall Brs.
Germany, 47 W. A. Rose & Co.
" 25 Wilkinson, Heywood, & Co.
Holland, 22 J. Owen

Wood Pulp—
Portugal, 250 pks. Page, Son, & East
Sweden, 80 Alsing & Co., Ld
" 272 C. S. Lovell
" 200 Ekman Pulp & Paper Co.
" 160 W. G. Taylor & Co.
" 400 Henderson, Craig, & Co.
" 400 Tough & Henderson
Norway, 800 "
" 4,745 London Paper Mills Co.
Holland, 71 Henderson, Craig, & Co.
Belgium, 2,014 rolls J. Harrison

Zinc Oxide—
Germany, 75 brls. M. Ashby, Ld.
U. States, 300 "
Holland, 2 cks. "

LIVERPOOL.

Week ending July 21st.

Alumina Hydrate—
Antwerp, 20 cks.

Aluminium—
Naples, 6 cs.

Asbestos—
Genoa, 37 pks. 7 bls.

Barytes—
Antwerp, 50 bgs.
Bremen, 20 cks.
Rotterdam, 22

Bones—
Jaffa, 375 bgs. J. Jowett & Son

Bone Black—
Philadelphia, 30 brls.

Boracic Acid—
Leghorn, 14 cks.
Rotterdam, 3

Boracite—
Pandermo, 250 t.
Constantinople, 7,288 bgs.

Borax—
Leghorn, 57 brls.
Rotterdam 24 cks.

Castor Oil—
Genoa, 20 cs.

Chemicals *(otherwise undescribed)*
Genoa, 7 pks. & qty.
Antwerp, 5 brls.

Colours—
Rotterdam, 220 cks. 2 cs. 6 tubs.
Antwerp, 81 150 bgs.

Cream of Tartar—
Tarragona, 1 bt.
Bordeaux, 15 cks.

Dyestuffs—
Extracts
New York, 140 brls.
Fiume, 438
" 500 Oak Extract Co.
Bordeaux, 34 cks.
Genoa, 100 brls.
Fustic
Trieste, qty.

Myrabolams
Bombay, 650 bgs.
Shumac
Palermo, 52 bgs. Eaton Smith & Co.
" 100 "
Valonia
Smyrna, 26 t. 497 bgs. Berry Brs.
Patras, 1,619

Dyestuffs *(otherwise undes.)—*
New York, 49 t. E. Brownbill & Co.

Farina—
Fiume, 200 bgs. 40 bls.

Glucose—
New York, 249 brls.
Boston, 289 L. Sutro & Co.

Glue—
New York, 10 kgs. S. A. Budgett
Fiume, 4 cks.
Boston, 20 kgs. J. Robinson
19 crts. & Son
Rotterdam, 102 bgs. 4 cs.

Lead Acetate—
Hamburg, 1 ck.

Mercury—
Gijon, 131 flasks.

Mineral White—
Fiume, 660 bgs.

Molasses—
N. Orleans, 210 brls.

Ochre—
Boston, 70 cks. Co-op W'sale Society, Ld
" 18 R. J. Francis & Co.

Paraffin Scale—
New York, 576 brls. Thompson & Bedford

Phosphates—
Antwerp, 6 cks.

Plumbago—
Genoa, 100 bgs.

Potash—
Havre, 25 cks. Cunard S. S. Co.
Rouen, 60 Co-op. W'sale Society, Ld.
Rotterdam, 77
Hamburg, 10

Pumice Stone—
Messina, 24 cks. 116 bgs.

Rosin—
Charlestown, 2,000 brls.
Baltimore, 300

Saltpetre—
Karachi, 359 bgs.
Hamburg, 4 cks. 25 kgs. 2 brls.

Soap—
Genoa, 50 cs. J. Bunten & Co.
Naples, 39
Bari, 193
Smyrna, 4
New York, 1,000 bxs. B. T. Babbitt

Soap Stock—
Bari, 31 brls.

Sodium Nitrate—
Tocopilla, 11,788 bgs.
Iquique, 3,827 sks.

Sodium Sulphate—
Boston, 1 brl. Fraser & Co.

Starch—
New York, 6 cs. J. Armstrong & Co., Ld.
Hamburg, 381 14 cks.
Antwerp, 170 J. T. Fletcher & Co.
" 220
Amsterdam, 11 bxs.
Rotterdam, 60 cs.

Stearine—
Antwerp, 37 bgs. 1 cs.

Sulphur Oil—
Catania, 100 brls. Brown, Shipley & Co.
Bari, 29

Tallow—
New York, 127 hds.
Campana, 100 cks. 267 pps.
Boston, 200 brls. J. Mackee
" 60 tcs. Stolterfoht & Co.
Boston, 172 11 hds. 21 brls.
Las Palmas, 200 pps. Lond. & Brazil Bank
B. Ayres, 945 cks.

Tartaric Acid—
Messina, 4 cks.

Varnish—
New York, 31 brls.
Rotterdam, 3 cks.

Waste Salt—
Hamburg, 80 t.

Wood Pulp—
Rotterdam, 44 pks. 313 bls.
Drammen, 80 bls.
" 80 H. Bjoreen

Zinc Ashes—
Genoa, 25 bgs.
Philadelphia, 91 brls.

Zinc Oxide—
Antwerp, 78 brls.
New York, 50

MANCHESTER.

Week ending July 23rd.

Acetate of Lime—
Rouen, 154 bgs.

Acids—
Rotterdam, 40 d.-jns.

Ammonium Acetate—
Rotterdam. 2 brls.

Aniline Salts—
Rotterdam, 20 cks.

Antimony Salts—
Hamburg, 1 ck.

Barytes—
Antwerp, 100 bgs.
Rotterdam, { 100 / 21 cks.

Benzoline—
Antwerp, 2 cs. J. T. Fletcher & Co.

Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 10 cs.

Colours—
Antwerp, 1 ck. 2 cs.
Rotterdam, { 96 39 18 bxs. / 205 brls.

Cottonseed Oil—
Rotterdam, 70 brls.

Dyestuffs—
Alizarine
Rotterdam, 25 cks.
Aniline
Rotterdam, 1 ck.
Aniline Colours
Hamburg, 49 cks.
Extracts
Rouen, 16 cks.
Madder
Larnaca, 6 bdls.

Farina—
Hamburg, 280 bgs.
Rotterdam, 10

Gelatine—
Rouen, 4 cs.

Glucose—
Rotterdam, 10 cks.

Glue—
Antwerp, 6 cks. 80 bls.
Rotterdam, 400 bgs. 3 cs.
Rouen, 26 cks.
Treport, 12 pks.

Lead Acetate—
Rouen, 56 cks.

Limestone—
Antwerp, 7 crts.

Litharge—
Rotterdam, 43 cks.

Potash—
Hamburg, 10 cks.

Soda Crystals—
Rouen, 10 cks.

Sodium Nitrate—
Rotterdam, 12 cks.

Sodium Sulphate—
Rotterdam, 1 dm.

Starch—
Rotterdam, 45 cs.

Stearine—
Antwerp, 5 bgs.

Tannin—
Hamburg, 10 cks.

Tartar—
Hamburg, 22 cks.

Tartaric Acid—
Rotterdam, 18 cks.

Tar Waste—
Rotterdam, 4 cks.

Ultramarine—
Rotterdam, 1 ck.

Wood Pulp—
Christiania, 40 bls.
Drammen, 1,706
Hamburg, 70 400 pks.
Norrkoping, 1,380
Skien, 3,350
Stockholm, 1,200 W. H. Stott & Co.

Zinc Oxide—
Hamburg, 28 cks.
Rotterdam, 40 brls.
Zinc White—
Rotterdam, 50 cks.

HULL.

Week ending July 23rd.

Ammonium Acetate—
Rotterdam, 1 brl. Hutchinson & Son
Antimony—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Barytes—
Antwerp, 38 cks Wilson, Sons, & Co., Ld.
" 40 Bailey & Leetham, Ld.
40 bgs.
Bremen, 22 cks.
Rotterdam, 84 Hutchinson & Son
Castor Oil—
Trieste, 10 cs. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Antwerp, 8 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 48 dms. "
Colours—
Antwerp, 19 pks. Wilson, Sons, & Co., Ld.
" 1 cs. Bailey & Leetham, Ld.
" 1 ck. Storry, Smithson, & Co.
Dunkirk, 25 brls. Wilson, Sons, & Co., Ld.
Ghent, 17 cks. "
Hamburg, 6 cs. "
Rotterdam, 1 ck. W. & C. L. Ringrose
" 3 cs., 61 pks., 13 cks. Hutchinson & Son
" 9 Wilson,
1 cs. Sons, & Co., Ld.
Trieste, 20 brls. "
Cream of Tartar—
Rotterdam, 4 cks. W. & C. L. Ringrose
Dyestuffs—
Alizarine
Rotterdam, 25 cks. W. & C. L. Sons. &Co., Ld.
" 37 pks. Hutchinson
5 brls. & Son
Extracts
Trieste, 15 brls. Wilson, Sons, & Co , Ld.
Fustic
Trieste, 5 t. Wilson, Sons, & Co., Ld.
Shumac
Palermo, 450 bgs. Wilson, Sons, & Co., Ld.
" 250
Trieste, 50 "
Farina—
Stettin, 100 bgs. Wilson, Sons, & Co., Ld.
Glucose—
Hamburg, 32 cks.
New York, 25 brls. Wilson, Sons, & Co., Ld.
" 150
Rotterdam, 10 cks. Hutchinson & Son
Glue—
Antwerp, 40 bls. Bailey & Leetham, Ld.
Hamburg, 21 pks. Wilson,
100 bgs. Sons, & Co., Ld.
Rouen, 67 cks. Rawson & Robinson
Lime Acetate—
Hamburg, 1 ck.
Lithopone—
Rotterdam, 1 ck. Hutchinson & Son
Mineral White—
Fiume, 100 bgs. Wilson, Sons, & Co., Ld.
Ochre—
Bremen, 20 cks.
Rouen, 67 Rawson & Robinson
Phosphates—
Tonis, 500 t.
Ghent, 160, 1,000 bgs.
Potash—
Dunkirk, 37 cks. Wilson,
31 pks, Sons, & Co., Ld.
Pumice Stone—
Hamburg, 30 cs. Wilson, Sons, & Co., Ld.
Messina, 110 pks. "
Pyrites—
Huelva, 2,106 t.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soap—
Bari, 60 cs. Wilson, Sons, & Co., Ld.
" 166
Rotterdam, 1 W. & C. L. Ringrose
Soda—
Hamburg, 148 bgs. Wilson, Sons, & Co., Ld.
Sodium Sulphate—
Rotterdam, 4 dms. Hutchinson & Son
Starch—
Antwerp, 100 cs. Wilson, Sons, & Co., Ld.
Bremen, 1,187 Veltmann & Co.
Fiume, 50 bgs.
Ghent, 270 cs. Wilson, Sons, & Co., Ld.
Tallow—
Dunkirk, 425 cks. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 6 cks. Hutchinson & Son
Turpentine—
Antwerp, 50 cks. Runton Brs.
" 162 brls. Wilson, Sons, & Co., Ld.
Ultramarine—
Rotterdam, 4 cks. W. & C. L. Ringrose
Varnish—
Antwerp, 5 cks. T. F. Chambers & Co.
White Lead—
Amsterdam, 21 cks. W. & C. L. Ringrose
Antwerp, 26 Bailey & Leetham, Ld.
Rotterdam, 54 W. & C. L. Ringrose
" 34 Hutchinson & Son
Wood Pulp—
Bergen, 288 pks. Wilson, Sons, & Co., Ld.
Christiania, 3,110 bls. "
Drontheim, 1,440 "
Gothenburg, 523 "
Hamburg, 640 pks. Bailey & Leetham, Ld.
Hango, 3 bls. J. Good & Sons
Zinc Oxide—
Antwerp, 20 cks.
Zinc White—
Rotterdam, 8 cks. Hutchinson & Son

GLASGOW.

Week ending July 28th.

Acetic Acid—
Rotterdam, 10 carboys J. Rankine & Son
Alum—
Rotterdam, 31 cks. J. Rankine & Son
Alumina Sulphate—
Rotterdam, 31 cks. J. Rankine
100 bgs. &Son
Asbestos—
Montreal, 381 bgs.
Barium Sulphate—
Antwerp, 450 bgs.
Barytes—
Hamburg, 270 bgs.
Rotterdam, 52 J. Rankine & Son
Bleaching Powder—
Rotterdam, 22 cks. J. Rankine & Son
Castor Oil—
Rotterdam, 200 cks.
Antwerp, 28
Chemicals *(otherwise undescribed)*
Hamburg, 5 cs.
Rotterdam, 22 pks. J. Rankine & Son
Colours—
Hamburg, 10 cks.
Rotterdam, 117 pks.
Dyestuffs—
Aniline
Rotterdam, 6 bxs. J. Rankine
16 brls. 4 cs. & Son
Aniline Colours
Amsterdam, 1 ck. 1 cs.
Extracts
Baltimore, 50 brls.
New York, 2 kgs.
Dyestuffs *(otherwise undescribed)*
Baltimore, 261 bgs.
Glucose—
New York, 1,000 brls.
Baltimore, 50
Glue—
Rotterdam 11 cs. J. Rankine & Son
Hamburg, 10 cks.
Antwerp, 2
Rouen, 4
Christiania, 100 bgs.
Ochre—
Rouen, 34 cks.
Rotterdam, 14 J. Rankine & Son
Paint—
New York, 1 cs. 1 bx.
Paraffin Scale—
New York, 500 brls.
Phosphates—
Bona, Algeria, 220 t. A. Cross & Son, Ld.
Ghent, 1,040 bgs.
Phosphorus—
Baltimore, 5 cs.
Plumbago—
Rotterdam, 36 cs.
Pyrites—
Huelva, 2,188 t. Tharsis Co.
Rosin—
Baltimore, 1,800 brls.
Soap—
New York, 5 brls.
Boston, 1 dm.
Sodium Acetate—
Rouen, 10 cks.
Sodium Nitrate—
Taltal, 9,169 bgs.
Starch—
Baltimore, 1,115 bgs.
New York, 1,000 sks.
Antwerp, 200 cs.
Sulphur Ore—
Huelva, 1,200 t. Seville Sulphur & Copper Co.
Tallow—
Rotterdam, 24 tcs. J. Rankine & Son
Baltimore, 60
Tartaric Acid—
Rotterdam, 4 cks. J. Rankine & Son
Ultramarine—
Rotterdam, 8 cks. J. Rankine
4 cs. & Son
Varnish—
New York, 20 brls.
Waste Salt—
Hamburg, 253 cks. 100 t.
White Lead—
Rotterdam, 39 cks. J. Rankine
29 pks. & Son
Wood Pulp—
Rotterdam, 50 bls. J. Rankine & Son
Christiania, 560
Zinc Oxide—
New York, 200 brls.
Zinc White—
Rotterdam, 16 cks. J. Rankine
51 pks. & Son

TYNE.

Week ending July 23rd.

Alum Earth—
Hamburg, 187 cks. Tyne S. S. Co.
Ammonium Sulphate—
Bergen, 1 cs.
Barytes—
Rotterdam, 71 cks. Tyne S. S. Co.
Colours—
Hamburg, 1 ck. Tyne S. S. Co.
Limestone—
Antwerp, 5 crts. Tyne S. S. Co.
Paint—
Hamburg, 44 dms. Tyne S. S. Co.
Paraffin Wax—
New York, 200 cs. C. Hassel & Son
Phosphates—
Antwerp, 320 t. Langdale's Chemical M. Co.
Pyrites—
Huelva, 1,008 t. Tharsis Sulphur & Copper Co.
Soap—
New York, 1,500 bxs. Jas. Cooke & Co.
Rotterdam, 16 cs. Tyne S. S. Co.
Starch—
Antwerp, 40 cs. Tyne S. S. Co.
Rotterdam, 92 "
White Lead—
Antwerp, 34 brls. Tyne S. S. Co.
Wood Pulp—
Montreal, 4,020 bls.
Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending July 20th.

Alizarine—
Rotterdam, 25 cks.
Alkali—
Calais, 4 cks.
Alum—
Rotterdam, 2 cks.
Antimony—
Boulogne, 9 cks.
Caoutchouc—
Boulogne, 2 pks.
Chemicals *(otherwise undescribed)*
Hamburg, 2 cks.
Colours—
Hamburg, 4 cs.
Dyestuffs *(otherwise undescribed)*
Hamburg, 5 t.
Amsterdam, 3 cks.
Boulogne, 33 11 cs. 228 pks.
Rotterdam, 390 90
Farina—
Amsterdam, 150 bgs.
Delfszyhl, 150
Glucose—
Calais, 100 bgs.
Glue—
Boulogne, 1 ck. 5 cs.
Hamburg, 10
Ochre—
Calais, 36 cks.
Phosphate—
Dunkirk, 1,600 bgs.
Plumbago—
Boulogne, 3 cs.
Potash—
Calais, 47 dms.
Dunkirk, 60
Pyrites—
Huelva, 700 t.
Saltpetre—
Rotterdam, 100 bgs.
Starch—
Ghent, 80 bgs.
Tartar—
Hamburg, 5 cks.
Waste Salt—
Hamburg, 100 t.
Wood Pulp—
Skien, 3,550 bls.

GRIMSBY.

Week ending July 23rd.

Barytes—
Antwerp, 40 bgs.
Hamburg, 20 cks.
Caoutchouc—
Antwerp, 3 cs.
Hamburg, 5 1 pk.
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Hamburg, 3 cs. 1 dm.
Colours—
Antwerp, 1 ck. 95 pks.
Hamburg, 19 4 cs. 91
Rotterdam, 2
Farina—
Hamburg, 40 bgs.
Plumbago—
Hamburg, 1 ck.
Zinc Ashes—
Rotterdam, 10 cks.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 27th.

Acids—

Lisbon,	4 hds.		£15
Azores,	12 pks.		26
Shanghai,		29 cs.	98
Madras,		55	51
Geraldton,		3 kgs.	18

Alkali—

Pt. Elizabeth,		10 c.	£12

Ammonia—

Durban,		5 cs.	£15
Cape Town,		8	12
Calcutta,		6	26
Brisbane,		8	21

Anhydrous Ammonia—

Antwerp,	20 cylds.		£70
Hong Kong,		5 cs.	63
Cologne,	22		60
Shanghia,		8	27

Ammonium Carbonate—

Dunedin,		10 c.	£16
Montreal,	1 t.	6	33
St. Petersburg,	4		105
Odessa,	5		512

Ammonium Chloride—

Constantinople,	5 t.		£143
Lyttleton,		7 c.	10
Masscilles,		11	16
Dusseldorf,	5	10	96
Melbourne,	1	17	43

Ammonium Sulphate—

Ostend,		5 c.	£10
Demerara,	15 t.		147
Hamburg,	120		1,031

Arsenic—

Gisborne,		25 kgs.	£19

Borax—

Delagoa Bay,	1 t.	10 c.	£23
Lubeck,	1	5	16
Hobart,		12	73

Carbonic Acid Gas—

Channel Is.	47 tubes		£18

Caustic Soda—

Brisbane		9 c.	£18
Melbourne		5	8
Canterbury,		13	38
E. London,		19	15
Cape Town,		9	9
Alexandretta,	5 t.	5	52

Chemicals *(otherwise undescribed)*

Durban,		1 cs.	£25
Montreal,		3	11 pks. 89
Toronto,		20	78
Hamburg,	2 cks. / 58 kgs.		34 dms.520
Rotterdam,	7		54
Cologne,	10		3 pks. 108
Genoa,	70		382
Brisbane,		54	62
Las Palmas,	20 bgs.		19
Cadiz,	2 cks.		19
Antwerp,	10 kgs.		57
Adelaide,		72 59	219
Boulogne,		1	16
Melbourne,	4 cks.	1 135	297
Alexandria,		9	43
St. Petersburg	20 kgs.	1	122
Halifax,		16	65
Sydney,		57	191
Singapore,		6	22
Jamaica,		13	602
Perth,		39	73
Tientsin,		11	15
Madras,	17		22
Karachi,		3 cs.	37
Brussels,		2	22

Citric Acid—

Colombo,	1 ck.		£7
Ostend,		1 cs.	7
Bombay,		2	10

Coal Products—

Alizarine

Melbourne,	3 cks. / 1 kgs.		£80

Aniline

Sydney,	2 cks.		£6
Oamaru,		3 cs.	54

Aniline Oil

New York	24 dms.		£700

Anthracene

Melbourne,	4 cks.		£48

Benzol

Le Treport,	108 cks.		£285
Boulogne	50		120

Carbolic Acid

Toronto,	10 cks.		£77
Ludwigshafen,	73		328
Malta,	2		6
Hamburg,	96		755

Creosote

Dieppe,	22,775 gls.		£119

Pitch

Hochfie	140 t.		£191
Antwerp	953		1,082
Boston,	200 cks.		64
Hamburg,	50 brls.		50
Danzig,	225 t.		225
Falkland Is.,	5 cks.		12
Alexandria,	200 brls.		50
Signapore	25		29
Montreal,	390 cks.		135

Pyridine

Konigsberg,	3 dms.		£104

Tar

Delagoa Bay	50 dms.		£6
Adelaide	50		10
Las Palmas	10 brls.		8
Stettin	1,025		504
Falkland Is.,	5 cks.		6

Tar Oil

Melbourne,		12 cs.	£15

Copper Sulphate—

Odessa,	4 t.	19 c	£81
Antwerp,	10	5	161
Brisbane,		10	16
Paris,	5		75
Treport,	5	4	8
Porto Alegre,	1	2	39
Shanghai,		15	14
Amsterdam,	4	18	82

Cream of Tartar—

Fremantle,		13 c.	£44

Disinfectants—

Brisbane,		18 pks.	£28
Sydney,		23 cs.	68
Melbourne,		20	51
Bombay,		8	20
Montreal,		65	55
Adelaide,		6	16
Karachi,	20 dms.		18
Hamburg,		18	20
Cape Town,	100		103
Oporto,		4 cs.	18
Calcutta,	1,000		63
Wellington,		21	40
Hobart,		3	16

Glycerine—

Rotterdam,	5 t.	3 c.	£125

Manure—

Dunedin,	5 t.		£23
St. Kitt's,	10		90
Amsterdam,	5		13
Gothenberg,	59	2 c.	190
Bundaberg,	6		91
Madeira,	35	13	145
Riga,	101	4	225
Rouen,	15		50

Phosphoric Acid—

Demerara,	50 cks.		£130
Surinam,	10 t.		150

Phosphorus—

Launceton,		3 cs.	£24
Demerara,		2	10
Oporto,		6	58

Potassium Bicarbonate—

Philadelphia	2 t.	8 c.	£64

Potassium Bichromate—

Melbourne,		15 c.	£29

Potassium Cyanide—

Melbourne,		37 cs.	£366
Durban,	2 t.		214
Shanghai,		5	44

Potassium Prussiate—

Rotterdam,	5 t.		£227

Salt Cake—

Ghent,	125 t.		£170

Saltpetre—

Melbourne,	9 t.	10 c.	£70 2
Wellington,	1	10	3 1
Sydney,	4	3	8 3
Rio de Janeiro,	2 t.	9 c.	£51
Hobart,		10	10

Sheep Dip—

Sydney,	30 dms.		£19
Melbourne,		250 cs.	438
Durban,		110 pks.	35
San Francisco,	8 t.	14 c.	287
E. London,	1,150 dms.		289
Buenos Ayres,	14 t.	2 c.	500

Soda—

Penang,	1 t.	19 c.	£6
Rotterdam,	5	9	30

Soda Crystals—

Shanghai,	1 t.	13 c.	£5

Soda Salts—

Brussels,		2 c.	£18

Sodium Bicarbonate—

Hobart,		10 c.	£7

Sodium Hyposulphate—

Shanghai,	1 t.		£9

Sodium Nitrate—

Barbadoes,	38 t.		£304

Sodium Prussiate—

Hamburg,	5 t.	4 c.	£231

Sodium Sulphite—

Melbourne,		10 c.	£18

Sulphur—

E. London,	25 kgs.	50 pks.	£33
Oporto,	4 t.	1 c.	76
Cape Town,	10	4	83
Durban		18	7

Sulphuric Acid—

Pt. Elizabeth,		39 cs.	£25
Cape Town,		25	17
E. London,		50	37
Demerara,	50 carbys		25

Superphosphates—

Yokohama,	4 t.		£19
Riga,	98	17 c.	300

Tartaric Acid—

Dunedin,		9 c.	£53
Fremantle,		5	27
Brisbane,		10	59

LIVERPOOL.

Week ending July 27th.

Acetic Acid—

Piræus,	2 t.	17 c.	£56
Lisbon,	3 cks.		7

Alum—

Syra,	4 t.	4 c.	3 q.	£20
Cape Town,		17		5
Demerara,	2	3		15
Oporto	5	2		21

Ammonia—

Talcahuano,		1 c.	£8

Anhydrous Ammonia—

Port Said,		10 c.	£25

Ammonium Carbonate—

Bremen,		18 c.		£29
Barcelona,	1 t.		2 q.	28
Buenos Ayres,		19	3	28
Rio Grande,		12		13
Oporto,	3 cks.			7

Ammonium Chloride—

Smyrna,	1 t.	11 c.	3 q.	£54
Patras,		6		9
Barcelona,	4	4		77
Genoa,	1			17
Talcahuano		5	2	7
Melbourne,	1			18
Bombay,	2	15		105
Naples,	4 cks.			32

Ammonium Sulphate—

Nantes,	100 t.	18 c.	3 q.	£984
Palermo,	10			96
Genoa,	30	5		288
Las Palmas,	65			630
Colombo,	2	7		24

Barium Cyanide—

Rouen		15 c.	3 q.	£24

Basic Slag—

Nantes,	486 t.		£728
Bordeaux,	100		150

Bleaching Powder—

Baltimore,	115 cks.		
Boston,	395		
Cornwall,	25		
E. St. Louis,	21		
Lisbon,	18		
Milwaukee,	110		
Newport News,			33 sks.
New York,	157		25 bxs.
Philadelphia,	143		
Rouen,	9		
Vera Cruz,	123		

Boracic Acid—

Rotterdam,		11 c.	3 q.	£14
Melbourne,	2 t.	11	3	84

Borax—

Rotterdam,	15 t.	3 c.	2 q.	£121
Halifax,	3	7		50
Antwerp,	15	10	1	225
Galatz,	1	1	2	19
Melbourne,		40 kgs.		25
Sydney,	6			75
Hamburg,	2	10 c.		35
Monte Video,		7		5

Carbolic Acid—

Arequipa,		1 cs.		£13
Leghorn,	1 t.		1 q.	£73
Hamburg,	4	5 c.	3 q.	274
New York,	9	17		645
Rouen,	1	2	2	20
Melbourne,	2	6	2	85
Odessa,	1	14		63

Caustic Soda—

Alexandria,	123 dms.		
Adelaide,	110		
Amsterdam,	126		
Ancona,	20		
Antwerp,	170		36 pks.
Bahia,	20		
Baltimore,	50		
Barcelona,	382		25 cks.
Bari,	84		
Christiana,	5		
Coquimbo,	10		
Danzig,	3		
Dunedin,	67		
Galatz,	15		
Genoa,	45		
Hamburg,	32		
Hiogo,	390		
Honolulu,	10		
Jaffa,	50		
La Guayra,	30		
Leghorn,	30		
Lisbon,	100		
Maceio,	10		
Malaga,			190 pks.
Malta,	11		
Naples,	70		
New Orleans,	182		11 bxs.
New York,	175		
Oporto,	45		
Philadelphia,	200		
Rio de Janeiro	31		3 cks.
Rio G. do Sul,	50		
Rouen,	26		
St. Stephens,	50		
San Salvador,	30		
Santander,	18		
Santos,	20		
Sebastian,	60		
Sydney,	150	10 brls.	
Tarragona,	50		
Valencia	50		
Vera Cruz	52		
Wellington,			10 bxs.

Chemicals *(otherwise undescribed)*

Valparaiso,		2 c.	3 q.	£20
Marseilles,		10		14
Lisbon,		1 brl.		13
Odessa,	1 t.			30
Boston,	7	7 c.		200

China Clay—

Baltimore,	100 cks.		
Boston,	310 / 783 t.		
Montreal,	50 cks.		
Pernambuco,	40		
Philadelphia,	310		

Citric Acid—

Naples,	2 cks.		£50
Lisbon,	1 kg.		7

Coal Products—

Aniline Oil

Philadelphia,			13 dms.

Aniline Salts

Lisbon,	2 cks.		
Philadelphia,		60 cs.	

Pitch
Galatz, 30 brls.
Montreal, 2 cks.
Tar
Bordeaux, 100 cks.
Callao, 10 brls.
Honolulu, 100
Ibrail, 5
Para, 100 dms.
Philadelphia, 150
Copperas—
Syra, 4 t. 2 c. £9
Copper Sulphate—
Rotterdam, 3 t. 2 q. £47
Antwerp, 6 15 c. 2 169
Galatz, 2 10 41
Callao, 1 7 22
Bordeaux, 54 15 859
Braila, 1 2 3 18
Genoa, 6 100
Leghorn, 9 18 1 160
B. Ayres, 4 12 74
Sydney, 1 15
Ancona, 10 1 1 160
Melbourne, 3 49
Brisbane, 1 17
Fremantle, 1 17
Bourgas, 1 1 18
Disinfectants—
Calcutta, 12 c. £18
Dried Blood—
Rouen, 15 t. 5 c. £132
Dyestuffs—
Alizarine
Lisbon, 1 kg.
New York, 5 cks.
Aniline
Manaos, 1 ck.
Aniline Colours
Boston, 9 cks.
New York, 13 1 bx.
Extracts
Boston, { 4 kgs. / 25 cks. } 50 cs.
Hamburg, 10
Montreal, 10
Dyestuffs *(otherwise undescribed)*
New York, 1 cs.
French Chalk—
Bombay, 30 bgs.
Glycerine—
Hiogo, 2 t. 12 c. £53
Montreal, 14 2 283
Rotterdam, 20 6 1,250
Boston, 5 cs. 16
Yokohama, 1 5 c. 3 q. 12
Guano—
Malaga, 22 t. 18 c. £169
Iron Persulphate—
Lisbon, 4 cks. £7
Magnesia—
Champerico, 6 cs.
Guayaquil, 4
Paris, 21
Vera Cruz, 6
Magnesium Sulphate—
Bombay, 501 bgs.
Toronto, 210
Manure—
La Pallice, 300 t. 14 c. 3 q. £1,603
Las Palmas, 5 10 56
Danzig, 950 2,194
Oxalic Acid—
Boston, 7 t. 2 c. £195
Paint—
Algoa Bay, 10 pks.
Antwerp, 13 kgs.
Antofagasta, 6 cs.
Bilbao, 48 dms.
Calcutta, 60
Callao, { 10 / 32 brls. }
Canea, 1 ck.
Cartagena (Sp.) 16 dms.
Constantinople, 515
Gibraltar, 130 17 pks.
Havre, 72
Johannesburg, 1 cs.
Kingston, 482
Lagos, 25
Larnaca, 2 cks.
Lisbon, 2 dms.
Manaos, 50 cs. 13 cks.
Nassau, 25 pks.
Para, 2 cks.
Pernambuco, 36
Pt. Natal, 40
Pt. Said, 4 dms.
Quebec, 20
Rosario, 29 t. 14 c. 6 cks.
St. John's, 4 brls. 5
St. Thomas, { 84 pks. / 2 cks. }
Trieste, 10
Valencia, 5 crts.
Valparaiso, 333 kgs. 20
Vera Cruz, 12
Painter's Colours—
Algoa Bay, 30 cs.
Bombay, 2,001 kgs.
B. Ayres, 2 cks.
Calcutta, 2
Halifax, 24
Honolulu, 557 pks.
Lisbon, 38
Mollendo, 16 cks.
M. Video, 12
Puerto Plata, 6 brls. 7
Valparaiso, 6
Zanzibar, 20
Zante, 3
Paraffin Wax—
Constantinople, 30 cs.
Rio de Janeiro, 6
Phosphorus—
B. Ayres, 20 cs. £165
Hiogo, 65 684
Hong Kong, 7 75
M. Video, 5 42
Montreal, 4 58
Osaka, 10 82
Rio de Janeiro, 2 26
Yokohama, 20 210
Potassium Bichromate—
Rouen, 10 t. 15 c. £351
Trebizonde, 15 32
Vera Cruz, 1 19 84
Potassium Carbonate—
New York, 18 t. 12 c. £326
Potassium Chlorate—
Corunna, 1 t. £30
Fairwater, 10 c. 15
Gothenburg, 4 19 148
Gutujewski, 18 4 500
Hamburg, 10 300
Hiogo, 12 10 398
Philadelphia, 8 240
Rouen, 1 9 28
Stockholm, 5 171
Vera Cruz, 1 10 47
Potassium Cyanide—
Rio de Janeiro, 3 t. 3 c. 3 q. £275
Salt—
Algoa Bay, 64 t. 13 c.
Amsterdam, 110
Antwerp, 330 10
Bakana, 40 3
Baltimore, 770
Barbadoes, 30
Benin, 20 18
Boston, { 300 bgs. / 350 t. }
Calcutta, 6,553
Chicago, 200
E. London, 47 18
Forcados, 40
Fremantle, 15
Ghent, 72
Halifax, 567
Iquitos, 15
Kingston, 20
Lagos, 100
Limon, 10
Melbourne, 14 100 cs.
Montreal, 549 6 c.
Orebuk, 83
Para, 6,400 bgs. 6,708 sks.
Punta Arenas, 6 5 cs.
Rangoon, 745 t.
Richibucto, 120 1,960
Rio de Janeiro, 50 cs.
Rotterdam, 144
St. John's, N.B., 1,440
Santos, 200
Sydney, 6 t. 6 c.
Trangisvasg, 62
Trinidad, 2,500 bgs.
Valparaiso, 30 cs.
Salt Cake—
Sydney, 5 t. 6 c. £12
Terneuzen, 150 194
Sheep Dip—
Auckland, 225 dms. £93
B. Ayres, { 1 t. 14 c. / 1,900 dms. } 619
Cape Town, 2 t. 4 2 q. 25
Gisborne, { 100 dms. / 25 cs. } 5 cks. 76
Melbourne, { 120 dms. / 70 kgs. } 20 110
Montreal, 4 c. 5
M. Video, 4 t. 18 2 q. 250
Nelson, 50 dms. 25
Odessa, 3 t. 8 1 108
Punta Arenas, 6 15 195
Wanganui, 50 dms. 25
Wellington, 100 10 cks. 70
Soap—
Alexandria, 100 cs.
Algoa Bay, 700 bxs. 5 cks.
Antwerp, 10
Barbadoes, 300
Barcelona, 4
Batavia, 1,000
Belize, 585
B. Ayres, 2
Calcutta, 8 pks. 375 bdls.
Canaria, 658 bxs.
Cape Town, 781 50
Christiania, 6
Corfu, 10
Curacao, 55
Delagoa Bay, 1,670 7
Demerara, 1,650
Dunkirk, 50
E. London, 1,240 9
Galata, 20
Genoa, 305 20 brls.
Ghent, 100
Gibraltar, 100
Grenada 130
Guayaquil, 500
Honolulu, 3 cs.
Kingston, 56
Kotonou, 20
Lausanne, 140
Limon, 200
Luitta, 30
Madras, 69
Malta, 6
Manaos, 330
Melbourne, 1 25 pks.
Montreal, 500
Mossel Bay, 600
Para, 100
Penang, 405
Piræus, 10
Pt. Natal, 5,244 106 48 bdls.
Pt. Elizabeth, 500 50 6
Pt. Said, 40 3
Punta Arenas, 30
Rotterdam, 200 443
Rouen, 20
St. John's, 21
St. Thomas, 500
San Fernando, 400
Salonica, 50
Sierra Leone, 110
Singapore, 3,670
Sydney, 16 tnks.
Taltal, 100
Tamatave, 250 bdls.
Toronto, 1,000
Trinidad, 1,706
Valparaiso, 28
Victoria, 1
Wellington, 4 1 tnk.
Soda—
Cape Town, 23 kgs.
Gibraltar, 30 brls.
Malta, 50
Montreal, 145 pks.
Soda Ash—
Bahia, 7 cks.
Baltimore, 37
Boston, { 25 tcs. / 870 }
Brisbane, 311
B. Ayres, 100 brls.
Copenhagen, 78 bgs.
Drammen, 29
Fairwater, 900
Genoa, 250
Gothenburg, 230 pks.
Hamburg, 45 cks.
Leghorn, 20
Melbourne, 100
M. Video, 125
Montreal, 20 tcs.
Naples, 200
New York 500 25
Philadelphia, 24
Pt. Adelaide, 102
Pt. Natal, 20 kgs.
Rettino, 50 brls.
Rio de Janeiro, 50 100
Rotterdam, 12
Santander, 3
Stettin, 700 bgs.
Trieste, 106
Varna, 50
Wellington, 33
Yokohama, 115
Zante, 40
Soda Crystals—
Boston, 56 brls.
Pt. Natal, 5
Sodium Bicarbonate—
Adelaide, { 50 bgs. / 250 kgs. }
Algoa Bay, 10
Ancona, 20
Antwerp, 76 cks.
Bombay, 175 brls.
Brisbane, 400
Calcutta, 509 pks.
Cape Town, 45
Christiania, 20
Dunedin, 240
Galatz, 20 dms.
Halifax, 100
Hamburg, 40
Hiogo, 500
Lisbon, 50
London, 70
Malta, 15
Malaga, 48 pks.
Melbourne, 643
Marseilles, 210 4 cks.
Nagasaki, 100
Napier, 40
Nelson, 20
N. Orleans, 75 brls.
New Plymouth, 40
Pasages, 70
Penang, 10
Rouen, 225
Seville, 40
Varna, 40 dms.
Vera Cruz, 80
Wellington, 220
Sodium Chlorate—
Fairwater, 2 cks.
Hamburg, 5 brls.
Sodium Silicate—
Coronel, 10 brls.
Sfax, 30
Sulphur—
Boston, 150 t. £639
Sulphuric Acid—
Barbadoes, 40 glns. £5
Superphosphates—
La Pallice, 694 t. £1,403
Valencia, 200 425
Riga, 2,200 4,474
Tartaric Acid—
Wellington, 1 c. £5
Varnish—
Antwerp, 2 dms.
Bilbao, 2 cks.
Bombay, 8 cs.
Canea, 1
Constantinople, 9
Corfu, 2
Honolulu, 12
Leghorn, 5
Puerto Cabello, 1
Rosario, 1
White Lead—
Bahia, 20 kgs.
Zinc Chloride—
Bombay, 9 t. £109

MANCHESTER.

Week ending July 27th.

Acetate of Lime—
Bahia, 2 cks.
Alkali—
Germany, { 50 bgs. / 30 cks. }
Alum—
Bahia, 1 ck.
Ammonia—
Germany, 1 cs.
Anido Salts—
Switzerland, 11 cks.
Aniline Colours—
Holland, 11 kgs.
Aniline Oil—
Holland, 4 pns.
Bones—
Treport, 3 bgs.
Caustic Soda—
Germany, 100 dms.
Chemicals *(otherwise undescribed)*
Holland, 1 ck.
Montreal, 17 tcs. 122 hf.-tcs.
Rotterdam, 10 kgs.
Copper Sulphate—
Lille, 61 cks.
Dyestuffs *(otherwise undes.)*—
Bahia, { 1 bx. / 1 kg. / 3 cks. }
Christiania, { 50 bgs. / 2 cks. } 1 cs.
Toronto, 3
Fustic—
Toronto, 10 cs.
Gamma Acid—
Germany, 11 cks.
Switzerland, 9

Glue—
Germany, 11 cks.
Holland, 19
Glycerine—
Belgium, 1 dm.
Germany, 2 cs. 1
Logwood—
Toronto, 100 bgs. 10 cs.
Magnesium Sulphate—
Bahia, 1 ck.
Naphthylamine—
Germany, 1 ck.
Paint
Bagdad, 30 dms
Pitch—
Belgium, 1,105 c.
Pyridine—
Germany, 5 dms.
Size—
Amiens, 9 cks.
Soda Ash—
Bahia, 1 ck.
Sodium Naphthionate—
Germany, 54 cks.
Russia, 27 bgs.
Switzerland, 18 cks.
Sodium Silicate—
Germany, 1 cs.
Sodium Stannate—
Bahia, 1 ck.
Tar Oil—
Germany, 23 dms.
Varnish—
Bagdad, 2 cs.

HULL.

Week ending July 23rd.

Alkali—
Reval, 75 pks.
Ammonium Sulphate—
Genoa, 1,703 bgs.
Bleaching Powder—
New York, 47 cks.
Stettin, 20
Caustic Soda—
Christiania, 2 cks.
Chemicals *(otherwise undescribed)*
Alexandria, 12 pks.
Amsterdam, 43 cks. 600
Antwerp,
Christiania, 30 cs.
Constantinople, 25
Danzig, 21
Genoa, 24 102
Gothenburg, 1 5 10
Hamburg, 10 165
Konigsberg, 5
Odessa, 54
Rotterdam, 13 118
St. Petersburg, 9
Stettin, 67 5
Cottonseed Oil—
Amsterdam, 506 c.
Bremen, 200
Christiania, 17
Copenhagen, 151
Dunkirk, 103
Ghent, 102
Hamburg, 631
Rotterdam, 680
Stavanger, 4
Dyestuffs *(otherwise undescribed)*
Danzig, 1 cs.
Gothenburg, 2 cks.
Genoa, 10 16
New York, 5
Rotterdam, 2 kgs.
Linseed Oil—
Amsterdam, 104 c.
Antwerp, 50
Bergen, 6
Christiansand, 34
Christiansund, 42
Christiania, 208
Copenhagen, 72
Drontheim, 123
Hamburg, 20
Rotterdam, 69
Manure—
Dunkirk, 1,000 sks.
Paint—
Antwerp, 4 cks.
Bergen, 1
Painters' Colours—
Abo, 200 cks.
Amsterdam, 22 18 dms.
Antwerp, { 79 1 cs. 38 / 198 pks.
Bergen, 1
Constantinople, 1 250
Dunkirk, 18
Danzig, 6
Ghent, 4
Genoa, { 16 525 pks. / 80 dms.
Gothenburg, 10 210
Hamburg, 39
Harlingen, 2
Reval, 6
Riga, 2 2 pks.
Rotterdam, 16
St. Petersburg, 81 1
Stavanger, 2
Stettin, 20
Pitch—
Antwerp, 130 t.
Salt—
Reval, 10 t.
Slag Meal—
Reval, 1,336 bgs.
Riga, 4,340
Stettin, 2,120
Soap—
Amsterdam, 179 cs.
Tallow—
Stockholm, 5 cks.
Tannate of Soda—
Alexandria, 10 dms.
Tar—
Amsterdam, 6 cks.
Antwerp, 6
Bremen, 5
Christiania, 1
Copenhagen, 10
Dunkirk, 25 brls.
Hamburg, 17
Marseilles, 66
Rotterdam, 4
Varnish—
Antwerp, 4 cs.
Christiania, 1
Copenhagen, 2 cks.
Ghent, 2
Hamburg, 1
Reval, 1

GLASGOW.

Week ending July 28th.

Alum—
Canada, £22
Sydney, £46 12s.
Ammonium Sulphate—
Amsterdam, 237 t.
Barbadoes, 153 6 c.
Barcelona, 56 12
Demerara, 43 14¾
Italy, 53 14½
Kingston, 9 7¾
Nantes, 10 3¾
Rouen, £299
Bleaching Powder—
Calcutta, 2 c.
Valparaiso, 17
N.S.W., 12 t. 3¾
Bones—
Rouen, 10 t.
Boracic Acid—
Adelaide, £24
Borax—
Sydney, £37
Castor Oil—
Adelaide, £28 10s.
Caustic Soda—
Brisbane, 20 t. 15 c.
Coal Products
Benzine
France, £163
Creosote
France, £2,096
Creosote Oil
U.S.A., £180
Pitch
Canada, £105
France, 106
Hamburg, 9 t. 12 c. 400
Havre, 2,154
Venice,
Tar
Canada, £135
Rangoon, 108
U.S.A., 50
Tar Oil
Antwerp, £105
Copperas—
Bombay, £54
Dyestuffs *(otherwise undescribed)*
Canada, £44
Ottawa, £26 12s.
Rio de Janeiro, £975
Victoria, 22
Extracts—
Marysville, £33
Rouen, 68
Sydney, 27
Victoria, 59
Farina—
Oporto, £90
Rio de Janeiro, 53
Gelatine—
Canada, £153
U.S.A., 181
Guano—
Barbadoes, 25 t.
Hydrochloric Acid—
Calcutta, £50
Iodine—
Rotterdam, £700
Lead Nitrate—
Montreal, £48
Paris, 200
Linseed Oil—
Canada, 15 t. 6¾ c.
Cape Town, 3 16
Melbourne, 2 8
Pietermaritzburg, 2 4¾
Litharge—
Johannesburg, £23
Magnesium Sulphate—
Brisbane, £27
Paris, £37 13s.
Sydney, 29 16
Manganese (Recovered)—
Basle, £95
Rouen, £7 9s.
Rotterdam, £75
Paint—
Gibraltar, £27
Valparaiso, 68
Painters' Colours—
Adelaide, £129
Brisbane, 264
Bundaberg, 70
Calcutta, 266
Cape Town, 236
Johannesburg, 88
Melbourne, 279
New York, 58
Pietermaritzburg, 66
Rangoon, 159
Rockhampton, 30
St. John's, N'fld., 25
Sydney, 472
Transvaal, 48
U.S.A., 417
Paraffin Wax—
Antwerp, £40
Barcelona, 383
Bordeaux, 72
Christiania, 30
Genoa, 225
Italy, 154
Leghorn, 288
Marseilles, 30
Potash Salts—
Mexico City, £242
Potassium Bichromate—
Montreal, £130
Oporto, 71
Rouen, 879
Potassium Chlorate—
Sydney, £175
Rosin Oil—
Antwerp, £59
Salt—
Brisbane, 74 t. 12¾ c.
Sydney, 5 1¾
Soap—
Alexandria, 1 t. 4 c.
Valparaiso, 42 15
Sodium Bichromate—
Antwerp, 1 t. 1¾ c.
Barcelona, 4 19½
Ghent, 5 ½
Rotterdam, £9
Rouen, 11 8¾
Starch—
Rio de Janeiro, £336
Rotterdam, 142
Sulphuric Acid—
Rangoon, £300
Superphosphates—
Brisbane, 50 t.
Tallow—
Oporto, 1 t. 1 c.
Varnish—
Brisbane, £90
White Lead—
Oporto, £26

TYNE.

Week ending July 23rd.

Alkali—
Antwerp, 8 t. 2 c.
Rotterdam, 8 3
Ammonia—
Amsterdam, 20 t. 14 c.
Ammonium Carbonate—
Hamburg, 1 t. 8 c.
Antimony—
Antwerp, 1 t.
Hamburg, 6
Rotterdam, 2
Barium Carbonate—
Copenhagen, 3 t.
Hamburg, 160
Bleaching Powder—
Aalborg, 8 t. 12 c.
Amsterdam, 15 16
Antwerp, 11 15
Copenhagen, 6 10
Drontheim, 13 2
Gothenburg, 10 2
Rotterdam, 13 10
Caustic Soda—
Aalborg, 4 t. 7 c.
Amsterdam, 2
Copenhagen, 4 7
Gothenburg, 85 5
Hamburg, 23 4
Rotterdam, 14 10
Iron Oxide—
Sebastopol, 1 t. 9 c.
Paint—
Antwerp, 3 t. 18 c.
Copenhagen, 1 4
Hamburg, 15
Salt—
Amsterdam, 1 c.
Soap—
Amsterdam, 2 cs.
Soda—
Amsterdam, 4 c
Hamburg, 3 t. 4
Rotterdam, 10
Sebastopol, 24 7
Sulphur—
Gothenburg, 50 t.
Tallow—
Amsterdam, 1 c.
White Lead—
Gothenburg, 2 t. 6 c.
Narva, 5

GOOLE.

Week ending July 20th.

Alkali—
Rotterdam, 1 ck.
Coal Products *(otherwise undes.)*—
Amsterdam, 55 cks.
Antwerp, 1
Boulogne, 28
Hamburg, 30
Rotterdam, 4 2 cs.
Colours—
Antwerp, 1 ck.
Boulogne, 10 3 cs. 1 tin
Calais, 1
Ghent, 1
Rotterdam, 3
Dyestuffs *(otherwise undescribed)*
Ghent, 60 bgs.
Hamburg, 1 cs.
Manure—
Dunkirk, 637 bgs.

GRIMSBY.

Week ending July 23rd.

Chemicals *(otherwise undescribed)*
Hamburg, 12 btls. 2 pks.
Coal Products *(otherwise undes.)*—
Dieppe, 28 cks.
Colours—
Antwerp, { 1 kg. / 23 cks. 6 cs.
Malmo, 25
Guano—
Hamburg, 134 bgs.

PRICES CURRENT.

WEDNESDAY, AUGUST 3RD, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. .. per cwt.	6/-	&	8/6
,, Glacial .. .. ,,		37	6
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	14	2	6
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	0	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B .. .. ,,	0	0	2½
,, =24° B .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	9	11	3
,, ,, (grey) Hull .. .. ,,	9	8	9
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	5
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. aett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4½
Benzol, 90's .. .. per gallon	0	0	9¼
,, 50/90 ,, ... ,,	0	0	9¼
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. per lb.	0	0	7
,, (liquid 95/97% .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	0	19	6
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	3
Copper .. .. per ton	50	6	3
,, Sulphate .. .. ,,	16	7	6
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	0	0
,, Litharge Flake (ex ship) .. .. ,,	17	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, Nitrate	20	0	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	10	0	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	5	0
,, Borate .. .. per cwt.	2	5	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P .. .. .. ,,	0	4	0
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	5	0
Stearine .. .. per ton	24	10	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. ..nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	5	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98% .. .. ,,	0	1	2
,, Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
,, ,, (Caustic Potash) 75/80 % .. ,,	19	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3¼
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton f.o.r. w'ks.	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton 10 ton lots	8	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,, 10 ton lots	7	15	0
,, ,, (70 % Caustic Soda) ,, ,, ,, 10 ton lots	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, 10 ton lots	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, 10 ton lots	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	4½
,, Nitrite, 98 % .. .. per ton	25	10	0
,, Phosphate .. .. ,,	9	5	0
,, Prussiate .. .. per lb.	0	0	5½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	21	0	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	75	10	0
Zinc (Spelter) .. .. ,,	20	1	3
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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AND

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LATE ADVERTISEMENT.

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

COMMERCIAL INTELLIGENCE.

IT is not our intention to upbraid our commercial brethren for their shortcomings, or to question their intellectual powers, as the above title might lead some to suppose, but we purpose looking into the recommendations of the Departmental Committee which has just reported on the possibility of supplying the industrial world with fuller and earlier intelligence upon matters of trade and commerce.

This committee has made some recommendations which will probably receive but a half-hearted welcome from those for whose special benefit they have been made. The reason for this appears to be that traders, in clamouring for up-to-date consular reports and commercial information, have raised the Government to such a state of activity that they give promise of doing more than traders altogether desire.

The collection of private information about new markets and trade openings has, of course, been of paramount importance in building up individual businesses, and there seems to be a fear lest the new Commercial Intelligence Department, which this Committee would establish, should render such information available to one and all.

It is argued that this would eventually re-act prejudicially on trade by discouraging personal enterprise, but we are scarcely disposed to accept this assumption until it is clearly shown that this new Department would or could adequately supplant the individual endeavours which are now made under the stress of business competition.

It will be as well therefore to review the proposed duties of this Commercial Intelligence Department. Briefly stated they are as follows:—

(*a*) To collect and focus existing information upon any subjects of commercial interest, whether derived from official or from unofficial sources, and whether relating to British colonies or dependencies or to foreign countries. In other words, it should be a centre at which information on any given subject derived from the Foreign Office, the Colonial Office, the India Office, the Board of Trade, the Agents-General for the Colonies, the Chambers of Commerce, the Imperial Institute, private reports, reports from special correspondents, newspapers, &c., will be gathered together in a form convenient for reference.

(*b*) To reply to inquiries which can be answered by a short note or by word of mouth, or by reference to published commercial *data* and statistics. From this point of view one room, at any rate, of the office, should be easily accessible to the public.

(*c*) To direct inquirers who want special information to the proper quarter—*e.g.*, to the Commercial Department of the Foreign Office, the office of a particular colony, chamber of commerce, the Imperial Institute, and so forth.

Now, even after this collection and focussing, the bulk of this information will be of a general nature, and although it will be a great assistance to the man who has direct information about certain details to be able to speedily review any particular matter, this official information will not greatly help the otherwise uninformed trader in determining whether he shall launch into fresh undertakings or not.

On the other hand, it cannot be denied that on the receipt of information through private sources, traders will be able

to act with greater celerity and certitude if, in a few hours, as it were, they can collect particulars about all the incidentals, such as tariffs, certificates of origin, Customs and packing regulations, and similar technicalities of trade.

We cannot conceive that any such official department could possibly be made an effective substitute for individual efforts. The necessarily stilted routine would prevent inquiries of an exclusive nature being carried out with satisfactory despatch, and we think the charges for such special services would choke off all but those who could afford to employ their own direct agents.

After all, the whole of the recommendations of the Committee are virtually fulfilled already in the States, as, for instance, in the case of the Philadelphia Commercial Museums, which, for five years, have been working on lines almost exactly similar to those laid down by our Departmental Committee. It seems a pity, therefore, to decry any reasonable proposals for widening our commercial knowledge, because they may tend to destroy something rather like monopoly. Such methods are on a level with decrying railways and the telegraph, because they destroyed the exclusiveness of the Metropolitan news sheets, and robbed the mails of their dignity and consequentialness.

NOTES ON FOREIGN CHEMICAL TRADE.

GERMANY.

THE depression in the market for *sulphate of ammonia* which commenced in 1895, lasted without interruption till September of last year. The great impetus given to the iron trade caused an immense increase in the production of coke, and this over-production may be considered as the chief reason for the fall in price. This over-production, however, must not be looked upon as entailing lasting injury to the market, for the use of sulphate of ammonia is steadily increasing in Germany. For agricultural purposes, the substitution of sulphate of ammonia for Chile saltpetre, has been attended with considerable advantage, and this can only result in an increased demand for sulphate of ammonia. Although the production in Germany last year was more than doubled, it was still not nearly sufficient to satisfy the home demand, and considerable quantities were imported. In 1897, 33,113 tons of ammonia were imported into Germany, of which 24,023 tons came from Great Britain.

Bleach.—Formerly, Germany could not nearly supply her own requirements in chloride of lime, but was obliged to supply her rather large demand by import. This has entirely altered. The immense amount of chloride of lime produced by electric manipulations has caused the export of this article to be greater than the import. Of the quantity imported, Great Britain supplied nine-tenths, while the amount exported went principally to Belgium and the United States, each of these countries taking one-third of the entire export. Owing to the sharp competition and the perfection of the different processes by which it is manufactured, the price of this article has been reduced to so low a figure that it scarcely seems to be a remunerative trade. Still, the fact that English competition still exists, and that Germany still endeavours to compete in the trade, shows that it is anyhow capable of existing. There is a talk of obliging those factories producing chloride of lime by means of excessively cheap processes to stop their works, in order that the production of the other factories may be regulated. It is proposed that a convention of producers should place the whole trade in one hand, as had been done with caustic, etc., and other products of electric works.

Cyanide of Potash.—The demand has so increased during the last few months, that the German factories are no longer able to supply the desired quantities with sufficient promptitude, not even by the increase of 25 per cent. in the price, in which the English dealers (who were obliged to cover themselves for "bear" sales) were forced to acquiesce.

Sodium Carbonate.—The Commercial Chamber at Duisberg petitioned the Imperial Diet for a reduction of the import duties on crystallised soda from 1s. 6d. to 6d. per 220½ lbs., for calcined soda from 2s. 6d. to 1s., and for caustic soda from 4s. to 1s. 6d. per 220½ lbs. The petition, however, was opposed by the other German Commercial Chambers, apparently for the following reason, that as the revision of the English-German commercial tariff is imminent, it would not be advisable to grant concessions which would be advantageous to English trade, without first securing some reciprocal benefit. On many sides, however, the matter is considered to be of importance, because the lowering of the import rates on soda may lead to a corresponding reduction in similar articles. The ability of Germany to compete in this trade is shown by the steady increase in her import of untaxed salts, the gradual decrease of her import of soda from England, and the increasing export of soda from Germany to foreign countries.

Phosphorus.—The increase of the production in France and in Russia, to which Germany too will shortly have to be added (many new phosphorus factories being projected) appears likely to endanger the unlimited monopoly in this trade which has for many years been enjoyed by England. Germany consumes about 200 tons, and imported last year 260 tons. Her export was 71 tons, which went to Austria.

NORWAY.

Iodine and Soap.—A new firm, "Stavanger Lys and Sæbefabrik" has started manufacturing stearine candles, and also finer soaps.

A manufactory for burning seaweed into kelp, and treating it for iodine, has been started at Stavanger. Enormous lots of seaweed are found along the coast, but most of it has been exported as kelp to Scotland. The iodine manufactory, "Hillevaag Kemiske Fabriker," is not in the international ring or syndicate, but the owners feel sure it will prove successful.

Sulphur Ore.—The working of the Killingdal mines in Aalen (Trondhjem district), leased by the Bede Metal Chemical Company, Limited, of Newcastle, has been very satisfactory, and a very considerable quantity of sulphur ore has been exported. Another mine at Aalen, the Kjöli Gruber, is now also being worked by an English Company, with the view of taking it on a long lease if it proves satisfactory.

Aluminium and Calcium Carbide.—The Hafslund Aktieselskab have already contracted for the supply of motive power to two new factories now in course of erection near Fredrickstad, viz., one for the manufacture of aluminium and another for the production of calcium carbide used for the manufacture of acetylene gas. Besides these two new enterprises, contracts are also said to have been made for the supply of power to two other factories, the nature of which has not yet transpired.

The total export of *pyrites* from Christiana in 1897 amounted to about 900,000 tons of copper ore containing 20 per cent. copper (1,450 tons). More workpeople have been employed in 1897 than at any previous period, and the quantity of pyrites exported and copper ore produced has never been so great. The exportation of pyrites in 1898 is expected to exceed 1,000,000 tons.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for June, 1898, as compared with June, 1897 :—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	19,326	12,705	5,231	3,851
Sweden and Norway	15,841	10,114	3,022	2,220
Germany	16,122	14,070	3,643	3,406
Holland	11,441	4,843	1,979	1,035
France	3,448	3,706	1,197	1,260
Spain and Canaries	32,498	20,507	10,579	6,815
Italy	18,336	23,427	5,331	7,421
United States	197,940	67,656	45,870	13,565
Australasia	10,237	21,487	3,530	6,182
British North America	13,514	14,374	3,638	4,273
Other countries	101,483	85,908	28,512	25,450
Total	440,186	278,797	112,532	75,478

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	69,036	76,207	21,546	19,593
Other countries	26,922	8,452	12,691	9,920
Total	95,958	109,045	29,998	29,513

CHANGE OF ADDRESS.—We are informed that on August 1st the office of the Baldwin Fertilizer Co. was removed from Savannah, Ga., to Port Royal, S. C. The factories being already at Port Royal, the removal of the offices to the same point will place the firm in position to handle their business in every way more promptly, satisfactorily and economically. Their address for mail, express and all other correspondence than wires will be "Baldwin Fertilizer Co., Port Royal, S. C."

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Water Purifying Apparatus. W. Bruch. 16,180. July 25.
Treating Sewage. F. M. and D. D. Spence. 16,217. July 26.
Apparatus for Concentrating Sulphuric Acid, etc. O. Guttmann. 16,220. July 26.
Treating Complex Zinc and Lead Ores. J. Armstrong. 16,312. July 26.
Extracting Zinc from its Ores. J. Armstrong. 16,388. July 27.
Gold and Silver Extraction. J. J. Hood. 16,399. July 27.
Electrodes for Secondary Batteries A. Henneton. 16,464. July 28.
Extracting Baryta from Barium Ferrite. O. Imray. 16,536. July 29.
Manufacture of Gaseous Ammonia. B. Piffard. 16,544. July 29.
Manufacture of Gaseous Ammonia. B. Piffard. 16,577. July 29.
Manufacture of Lead Peroxide. A. E. Parker. 16,607. July 30.
Extracting Bismuth from Sulphide Ores. J. Randal. 16,622. July 30.
Manufacturing and Bleaching with Hydrogen Peroxide. C. J. Varnold. 16,631. July 30.
Using the Carbon Monoxide evolved in the Production of Calcium Carbide. B. H. Thwaite and F. L. Gardner. 16,639. July 30.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Manufacture of Organic Products from Seaweed. A. Krefting, 18, Kort Aldersgade, Christiania. Eng. Pat. 13,151. June 11, 1898.

After the seaweed has been dissolved according to the instructions in patent 11,538, 1896, the organic matter has to be precipitated. It is now suggested that this may be accomplished by electrolysing the solution of seaweed in weak sodium carbonate lye. The organic matter precipitates at the anode, and may easily be removed. The alkali metal is removed by using mercury as a cathode, thus regenerating the lye required for dissolving the seaweed. If desired, salts, such as sodium sulphate, may be added to reduce the electric resistance. Salt is also added, thus bleaching the organic matter at the same time.

Improvements in the Manufacture of Organic Products from Seaweed. A. Krefting, 18, Kort Aldersgade, Christiania. Eng. Pat. 13,289. June 14, 1898.

As the result of two years' experience in working patent 11,538, 1896, the patentee abandons the use of acid for the primary treatment of the seaweed. He has experimented, and finds that simple elutriation with water answers, only there is a loss of organic matter which passes into solution, amounting in some cases to 30 per cent. He has found, however, that the addition of calcium hydrate, chloride, or sulphate to the water used for elutriation overcomes this drawback, and gives even better results than the acid treatment, in addition to effecting a saving in alkali in the subsequent steps of the process.

Improvements in the Production of Chemical Compounds from a certain Oil or Oils, or the Fatty Acids of the same, and the Employment of such Compounds in the Manufacture of Drying Oils, Varnishes, Enamels, Lacquers, Anti-fouling Compositions, and the like. S. G. Rosenblum and S. Rideal, both of 28, Victoria-street, Westminster. Eng. Pat. 16,147. July 7, 1897.

Chinese wood oil, or tung oil, obtained by expression or extraction with solvents from the seeds of *Elæococca vernicia* is treated with caustic potash, soda, or ammonia, forming alkaline salts of the fatty acids. By double decomposition, metallic compounds can be formed from these alkaline salts, of which the most important are those of lead and manganese, as these salts can be used to advantage as "driers." They readily dissolve in linseed oil. Much smaller quantities are required than with the usual resinates or linoleates. Thus while 2·5 per cent. of the latter are now required, about 0·7 per cent. of the tung oil driers ("tungates") is sufficient. When the oil containing the tungates is atomised with a jet of ozone at 130° F, excellent results are rapidly attained in regard to drying power, viscosity, and colour. Many of these salts can be dissolved in turpentine, etc., forming superior quick drying varnishes, specially suitable for lacquering purposes.

An Improved Method of and Apparatus for the Production of Calcium Carbide, applicable also to other Purposes. H. Maxim, Thurlow Lodge, Norwood-road, London, and W. H Graham, Sunnyhurst, Trowbridge, Wilts. Eng. Pat. 18,989. August 17, 1897.

A rectangular furnace is provided with a horizontal electrode running along one side and common to a number of separate horizontal electrodes, opposed to it at right angles. The two electrodes are connected by thin rods of carbon, which are imbeded in the carbide-forming mixture, and become heated to incandescence, owing to the resistance they offer to the electric current. Moreover, the electrodes are so connected with a polyphase circuit that the current enters the furnace by one of the separate electrodes, passes through the carbon connecting rod to the common electrode, back through the second carbon connecting rod to the second separate electrode, and so on in a zig-zag path, until it returns to the generator from the end of the common electrode. There are five figures.

Improvements in Roasting Ovens or Furnaces for the Desulphurization of Volcanic Sulphur, Sulphurous Ores, and Ores containing a greater or less percentage of Sulphur. W. P. Thompson, 6, Lord-street, Liverpool (communicated by H. Harland and S D. Crenshaw, both of Richmond, Va., U.S.A.) Eng. Pat. 8,570. April 12, 1898.

The furnace bars are fixed, and carry a series of cone-shaped, hollow partitions, the walls of which are perforated. These admit air from the ash pit, and divide up the mass of ore, so that it has not the same tendency to pack, otherwise the burners are of the usual type. There are two figures.

Improvements in Coke Ovens. F. J. Collin, Dortmund, Germany. Eng. Pat 11,439. May 19, 1898.

This is a modification of the Collin oven described in the *Journal* (557, p. 68), by which special combustion chambers are provided at the ends of the coking chambers, which effectually carbonise the coal and ensure perfect coking. There are three figures.

GOLD OUTPUT IN THE RAND.

ANOTHER RECORD.

THE output from the Witwatersrand district during July, as cabled by the Chamber of Mines of the South African Republic, amounts to 359,343 ozs., while from outside districts 22,663 ozs. are reported, a total of 382,006 ozs. This shows an increase of 16,915 ozs., as compared with the previous total. No comparison with the corresponding month of 1897 can be made.

	1895.	1896.	1897.	1898.
	oz.	oz.	oz.	oz.
January	177,463	148,178	209,832	336,577
February ...	169,295	167,018	211,000	321,238
March	184,945	173,952	232,067	347,643
April	186,323	176,707	235,698	353,243
May	194,580	195,008	248,305	365,016
June	200,941	193,640	251,529	365,091
July	199,453	203,873	242,479	382,006
August	203,573	213,418	259,603	—
September ..	194,764	202,561	262,150	—
October	192,652	199,889	274,175	—
November ..	195,218	201,113	297,124	—
December ..	178,428	206,517	310,712	—
Total ..	2,277,635	2,281,874	3,034,674	2,470,814

NEW INDUSTRIES FOR THE SHIP CANAL.—It is understood that several important industrial undertakings are about to be established on the banks of the Ship Canal. Messrs. W. H. Bailey and Co., Limited, of the Albion Engineering Works, Salford, have, it is said, purchased a plot of land in Trafford Park for the purpose of building new works. A large site for new engineering works has also been acquired by Messrs W. T. Glover and Co., Limited, at Salford, who will, it is stated, supply electric light and power to the Trafford Park estate. New works are in course of erection for Messrs. Morison, Ingram and Co., sanitary engineers, of Cornbrook; the Manchester Patent Fuel Company's works and the Colonial Consignment and Distributing cold-air stores are just about completed, and good progress has been made with the necessary wharves and jetties for the use of ships loading fuel and discharging perishable produce. Additional land has also been purchased or leased for the extension of the oil storage depôts near Mode Wheel Locks. To meet the requirements of the traffic from the oil tanks, cattle lairages, the dry docks, and grain elevator, and the new malting house adjoining—the completion of which is being pushed forward—and the prospective requirements of the new works that are being laid down, considerable railway developments are spoken of; and it is not improbable that, in addition to the small railway that the Trafford Park estate is putting down, another railway and a road swing bridge across the canal just below Mode Wheel Locks may be necessary.

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Reports of Companies.

BRITISH ALUMINIUM CO., LTD.

The third ordinary general meeting of the British Aluminium Company, Limited, was held recently at the Westminster Palace Hotel, Victoria-street, Westminster, Mr. R. W. Wallace, Q.C. (the chairman), presiding.

The Chairman said: I should like to congratulate the shareholders on the progress that has been made since we last met. We have been rather late in calling you together, because there were one or two matters of policy on which we were not thoroughly decided, and it was thought better not to bring those matters before you until they were thoroughly matured. The directors have the fullest confidence in this undertaking, and as we have gained experience we have found that the anticipations which we had at the commencement of this enterprise have been, I will not say fully realised, but as far as we have gone we have proved that all we undertook to do was not only possible, but has been carried into effect. We have, however, not finally come to the end of the work which was contemplated. Now you must remember that this is the third year of the company's business, and that the earning capacity of the company has only recently been at all commensurate with the large capital which we have; and, consequently, as our preference shares are cumulative, we are not paying a dividend on the year under review, but we are paying dividends on former years in which no profit practically was earned. Since 1895, when the capital was first brought together in this company, we have equipped

FOUR LARGE FACTORIES,

and it must be remembered that the work of this company must be looked upon, not in the nature of a business which commences almost immediately to earn dividends, but that the earlier part of its life must be devoted to structural work—that is to say, the erection of the necessary forces which will afterwards earn dividends. It is very much like the construction of a railway or the sinking of a shaft in a mine, and not so much in the nature of carrying on a business which is merely a trading concern; and the first thing we had to do was to complete the waterworks, which are the basis of this business. We had to provide a large amount of energy, and the enormous cost of this energy, if coal were used as a source of giving that energy, would have crippled us, if not prevented us from carrying on this electrical process. When I tell you that the horse-power we have now actually at work at Foyers, if it were obtained by means of coal and machinery, would have cost something like £40,000. per annum, you will get an idea of the enormous saving that there is in using water-power as a source of energy. [This is on the basis of £8. per h.p. per annum from coal—Ed. *C.T.J.*] Since I last met you we have completed the storage which we promised you would be made effective. That was a very large engineering work, and it has been carried out most successfully. We have one of the largest, if not the largest, reservoir for the storage of water that exists in this country, and that work has been carried out at a comparatively small cost, because we have been practically our own contractors for the whole of it. We have let out a portion to small contractors in certain matters, because that was a more economical manner of executing it; but, generally, we have carried out the work ourselves, with the result of an enormous profit to this company. With regard to the

QUESTION OF DIVIDEND,

I may say that we are paying a small one now, because, being a cumulative one, it does not make any difference when it is paid, and we can more advantageously use the money in our business just now. At the present time we do not wish to increase our share capital, because we think it is far more advantageous to the shareholders, both preference and ordinary, that we should as long as possible keep the capital at its present amount. This dividend is small; we are keeping the remainder of the balance in hand, and as soon as we find that we have sufficient liquid capital at our disposal to pay a larger dividend we shall do so; but at present we are using the money in connection with the works which we are completing.

Since we last met we have increased very much our capacity for producing aluminium. We have especially devoted ourselves to the increase of this water-power. Of course, a great deal of this increase upon which money has been spent recently we shall not feel the value of for one or two years, and that will increase the capital value of which I have been speaking still further; but, really, we have been spending money in anticipation of that. It being necessary to make this expenditure, we have issued more debentures. We considered debentures the best way of raising money in the interests of the shareholders. It would have been very much easier to have issued more shares, especially as they are at a premium; but, looking at the interests of the shareholders, we thought it better to raise money by way of debentures Third debentures are not things that readily recommend themselves to investors, and certainly they are not investments suitable for trustees; but with the assets we have we could easily join these debentures together and have one first charge on the whole of the assets, and we propose to do that some time during next year. There will then be only one charge on the property of the company, which will be a first debenture charge, and which will be a very good trustee investment, because, looking at the water-power in the sense to which I have been referring, you have something which is like a coal mine, only it does not exhaust, and in connection with which there is no danger of strikes, and on which there is practically no depreciation and little expense for management. We have only issued £40,000. of debentures so that there is £60,000. available for our wants. Of course, in all these matters there is the question of how much commission you propose to give people for placing debentures; but we prefer to let our shareholders come in and take these debentures when they feel disposed to do so. We do not propose to let any of them be placed on commission unless we are in urgent need of money. With regard to the sale of the metal, I may say that the increase has been going on very steadily. For instance, in the first six months of this year, we have done as much as we did during the whole of last year, and last year we doubled the amount that we had sold the year before. Therefore, you see that there has been

STEADY PROGRESS IN THE SALE

of aluminium. This new metal has great possibilities, and you can measure it in this way. The actual raw material costs us 2s. 6d., and that has to be transformed to a value of £140. a ton, at which we sell it; consequently, you require a large amount of capital in the way of machinery to convert 2s. 6d. into a value of £140. It is not like an ordinary buying and selling transaction in which you may make a quick turnover; it requires a large amount of manipulation to transform a cheap material into such an expensive one. Therefore, you see we have a large margin for profit, and a large margin for reduction in the price of the manufacture. The directors are studying those questions very thoroughly, and I may say that we have reduced our cost of manufacture to such a point that we are below any of the other companies by a very large amount in the cost of production. The Neuhausen Company has been started since 1889, and our cost of production is very much below theirs, and also very much below the American companies'. I do not want to go too much into these matters; but I can tell you from our knowledge what is the position of the Neuhausen Company now. Their shares at present are about 150 per cent. premium, and they pay very large dividends—12 per cent. on their preference shares, and dividends also on their founders' shares, which are equivalent to our ordinary shares. They have sold all their metal for this year, and within the last few days they have asked us to let them have some of ours. That is very encouraging as regards the future of aluminium. In Germany the demand exceeds the supply, and, of course, if we were to lower our price and go into competition very seriously with copper the demand might become rather too much for us until we have increased our power. Of course, if there should be at any time any hitch in this way, it would be possible for us to seriously compete with copper. Bulk for bulk, aluminium is the same price as copper. We do not want to compete with any other metal; we have sufficient individuality in various fields to get the price we ask for the metal, and, of course, as long as we keep to the small quantities which we are making, there is no necessity to go to a lower price.

I may say that the German War Office is very much ahead of the English War Office in the use of aluminium. I am not one of those who believe in putting pressure on the Government by asking questions in the House of Commons, but certainly the German Army has been consuming large quantities of aluminium; so much so that the supply of the Neuhausen Company is practically exhausted. We know that in this country, in our public departments, and also in our engineering firms, we are slower to take up new ideas than other people. There is a great deal of friction on the part of men, and capitalists when they are earning money with one metal do not care to have their machinery altered for another metal. Consequently, we have not gone on with the sale of our aluminium to engineers as quickly as we should have liked. Some of the engineers explain this by saying that the strike had prevented them applying aluminium to the various uses to which they propose to put it, and that now the strike has ended and they have got fully to work, it will be some time before they take it up again. I might mention many firms who are in this position; for instance, Mr Bolton, who has been manufacturing aluminium tubes of a very high order, says that if people would only use them in larger quantities he could turn them out at half the price. It is a great difficulty to get the quantities and the price to suit. People do not care to sell at a loss in order to bring on a demand; but I wish Mr. Bolton could see his way to do it; for I am sure it would be advantageous to us and to him in the end. Some of these tubes you can see in bicycles. Messrs. Humber have made a very excellent aluminium bicycle. I do not say that it is not capable of improvement; but those who have ridden those bicycles have spoken very highly of them. With regard to increasing the sale of aluminium, it is extremely im-

portant that people should be able to get aluminium works erected in the district in which they reside. Some of the Glasgow shipbuilders and others have put together capital to put down a rolling mill at Greenock for the manufacture of internal fittings for ships, and, in consideration of our giving them the benefit of our experience in that matter, they have given us 10,000 shares in their company. If that turns out to be profitable, that will be for the benefit of the company. I was going to say a little more about the water-power, but I will not do that, because I do not want to trespass upon your time. I also intended to say a little more about the new uses to which aluminium has been put, but that, probably, would also be taking up your time.

METALLURGICAL APPLICATIONS.

I should like to say, however, that one of the growing uses of aluminium is in connection with the purification of other metals. It has been found out that by putting aluminium with other metals you can get rid of all their impurities. Of course, that is not of general use; but for many things that is a very valuable discovery. I mention it for this reason, that it has a very extended use in this way. In the manufacture of steel you put in a small ingot of aluminium—one-twenty-thousandth per cent.—into molten steel as it flows out of the blast furnace, and that makes such a difference in the steel that some of the best steel makers are using it in large quantities. We had an order for 50 tons the other day for that purpose. In connection with castings of brass and steel and other matters, the use of aluminium is gradually extending; therefore, there are plenty of outlets for this metal. I shall be glad to reply to any questions. I now beg to move: "That the report and accounts be received and adopted, and that a dividend at the full rate of 7 per cent. per annum be declared on the cumulative preference shares up to July 1st, 1896, and that such dividend be made payable on and after August 25, 1898."

Mr. A. S. Bolton seconded the motion, and in doing so said that one difficulty in the use of aluminium was that they did not seem able at the present time to solder the metal sufficiently well. They had experienced a difficulty at their works at Milton in rolling the metal effectually, but that had been overcome, and he considered that the metal produced at their works was quite as good as that which was produced in America, France, or any other part of the world.

In reply to a shareholder, the Chairman said that the bauxite was obtained from their mines in the North of Ireland, which were practically inexhaustible; at all events, they had enough to last them for forty or fifty years. With regard to the water power, they were actually running power for the Acetylene Company, in which they had shares, for the purpose of making carbide of calcium, and they got an income from one of their seven dynamos of £5,000 a year. The Aluminium Company was under an agreement with them not to make aluminium, and therefore he thought that company ought to change its name. In the same way the British Aluminium Company had undertaken not to make sodium. He did not think the shareholders need be frightened at the increase in capital expenditure. The debentures only amounted to one-third of the capital value of their property, which was not a large proportion considering most of the property was freehold land.

The resolution was put to the meeting and carried unanimously.

VOLENITE LTD.

The first general (statutory) meeting of the members of Volenite, Limited, was held on Monday, at Winchester House, Old Broad street, E.C., Lord Lurgan (chairman of the company) presiding.

The Chairman said: As you are aware, this is the statutory meeting of the Volenite Company, and I do not think I can vary the ordinary routine remarks of a chairman on this occasion. The company was registered on May 13th The shares were, I need hardly tell you, eagerly taken up, and therefore we have got our full working capital subscribed. The first thing your directors did was to exercise the option of purchasing the works at Gorleston, near Yarmouth, which we acquired for £1,300. The necessary alterations in those works are now being carried out. At the same time, I may mention that we do not propose to utilise those works very much, except for the purpose of keeping the Volenite Company supplied with sufficient oil. As you know, fish oil is the essential ingredient in the manufacture of Volenite. The terms of the purchase we consider were favourable, and as they include some cottages which bring in a rental of £30. odd per annum, you will see we have already got a reasonable interest on our outlay.

PROGRESS OF THE WORKS.

The next thing we did was to acquire the Alperton Works, which are near Willesden. We also obtained these on very reasonable terms, and we have arranged with the landlord for a lease for ninety-nine years. We have enlarged those premises by securing another acre of ground, which makes our property there about two acres in extent. This we did in view of the probability, or I might almost say the certainty, of the business extending. I think it is about as suitable a site as we could possibly have got. In the first place, there is a new railway being built, which runs within 10 yards of our building; and then there is a canal within a few yards also. This factory is being altered to meet our requirements, and machinery is being erected there. The first consignment of that machinery arrived last week—you will gather that this machinery is extensive when I tell you that its estimated cost is between £11,000. and £12,000., and the remainder will be completed, we anticipate, in three or four months, and will be running at the end of that time. The machinery is capable of turning out, roughly speaking, 1,500 tons of Volenite per annum, and we hope when it commences running, in about three or four months time, to be turning out Volenite on a commercial basis.

FURTHER IMPROVEMENTS.

With regard to Volenite I have nothing very particular to say to you except that we still consider it is everything that has been represented to us; but since I last spoke on the subject Mr. Lamplough informs me he has made some further developments and improvements. One important point is that whereas originally hard Volenite took three months to dry properly or become really hard, owing to a new process that Mr. Lamplough has devised, it can now be made hard in about twelve hours. We have had several applications as to negotiations for the sale of our foreign patents, but in view of pending developments we have decided to do nothing whatever as to disposing of those patents for the present.

Furthermore, I may state that we have had several applications from some of the largest houses in England, and, in fact, from most of the countries in Europe, for purchasing our outputs of Volenite, and two or three of those houses have already expressed their willingness to take our entire output for the first year, which I think you will look upon as a most satisfactory state of things, because these houses are well known, and would not be likely to commit themselves to such a large order unless they were fully satisfied as to the merits of the article.

Within a fortnight the first portion of the machinery at Alperton will be running, and will be capable of turning out Volenite in small quantities, so that I hope you will shortly have supplies in your hands and be able to test them in any way you wish.

A Shareholder asked when the works would be sufficiently advanced for them to be viewed.

The Chairman, in reply, said that as soon as the machinery which would turn out samples was completed Mr. Pope (the manager) would be delighted to see any shareholder at the works at Alperton, which was only some nine miles from London.

A. M. PEEBLES AND SON, LTD.

The second annual general meeting of this company was held on Wednesday, at Cannon-street Hotel, E.C. Mr. J. H. F. Walter, who presided, said that the gross profit this year was rather less than it was last year, being £22,892., against £25,280. That falling off was explained by the fact that they had bought a certain amount of machinery, that trade had been rather quiet since the Jubilee, and that they had had to take lower prices. The volume of their trade had, however, been rather more than in the previous year. It was proposed to pay a further dividend at the rate of 8½ per cent., and to carry forward a balance of nearly £8,000, or rather £1,200. more than they brought into the accounts. He had been down to the mills several times since the last meeting, and he might say that they had been doing a great deal of work there to satisfy the Ribble Commissioners, including the construction of some new settling tanks. They had doubled their *presse-pâte* house, and he thought that that would result in a great saving of manual labour. Other works were in progress, which would have the same effect, by enabling them to get the raw material into the mill without any handling at all. Competition was very severe, and that had led to a decline in prices. As foreshadowed last year, they had bought from Mr. Wilkinson on favourable terms what would be a valuable addition to their property at the Whiteash Mills. Both the mills had been kept fully employed during the year. The Japanese and Indian trade was going on quietly, and they were developing a trade in Australasia. It was a matter for regret that, owing to failing health, Mr. Mason Jackson had felt compelled to resign his seat on the board. To fill the vacancy thus created the board recommended the election as a director of Mr. Herbert Ingram. Referring to the Workmen's Compensation Act, he said that they had been paying 2s 6d. per cent. insurance in respect of employers' liability. To cover their liability under the new Act they were first asked to pay 35s. per cent., then 25s., then 12s. 6d., and finally an arrangement was arrived at for 7s. 6d. per cent. The board felt that they did not like to run the risks to which they were liable under the Act, and therefore they had insured with a good office. There seemed to be no finality about the Act, and he did not think that they should blame the insurance companies for quoting high rates, so much as Mr. Chamberlain and others had done, because the offices could not tell what was the extent of the liability they accepted. After explaining several items in the accounts, he moved the adoption of the report. Mr. G. J. Maddick seconded the motion, and, after a few remarks from Mr. Laurie, who congratulated the board on the satisfactory character of the report, the motion was agreed to unanimously.

Our Book Shelf.

Thirty-fourth Annual Report on Alkali, etc., Works. Being the report for the year 1897. 129 pp London: Eyre and Spottiswoode. 1898. 9½d.

The report of the Chief Inspector shows that apart from certain difficulties arising from the indisposition of a sub-inspector the standard of purification has been raised.

There has been a decrease of 26 in the number of processes under control and a decrease of 16 in the number of works registered. This reduction has been brought about by the following changes since 1896: —Alkali manufacturing processes have diminished by seven, sulphuric acid by one, chlorine and bleach by 5, tar by 5. The only increases are —in sulphur recovery by five, in nitrate and chloride of iron one, and muriatic acid one.

Though the number of tests and visits made by the inspectors are considerably smaller than in 1896, the total percentage of acid gases escaping is lower, being 0·788 grains SO_3 per cub. ft., as compared with 0·803 in 1896. The figures for hydrochloric acid from alkali works are 0·081 against 0·091 grains per cub. foot. Chamber exits average 1·184 against 1 210.

There have been three prosecutions, all under Sec 9, which enforces the obligation of adopting "the best practicable means." The proceedings in these cases are only in keeping with the progressive principles of the Alkali Act. We are pleased to see there has been no occasion to take proceedings for "obstruction."

Apart from statistics there are many topics of interest referred to in the reports of the chief and sub-inspectors. The investigation of ammoniacal liquors from various sources has been continued. Special attention has been paid to the uncondensable white fumes given off during the rectification of vitriol by surface evaporation, and the experimental investigations which have been made are both useful and instructive. An improved form of absorbing apparatus is illustrated and described in connection therewith. The question of escapes from acid concentrating plants is constantly referred to in the district reports, and promises to closely engage the attention of the inspectors during the present year. The production of sulphate of ammonia keeps increasing, but so far the home consumption has only been "encouraged" to the extent of 2,000 tons. It is very gratifying to find that the error in the last report, to which we drew attention, concerning the question of precedence in the use of oxygen as a restorative, is courteously corrected and made the occasion for an *amende honorable*.

Lighting by Acetylene. W. E. Gibbs. 141 pp, with 66 illustrations. London: Crosby, Lockwood, and Son. 1898. 7s. 6d.

This work deals very slightly with acetylene lighting, but more extensively with acetylene generally, and generators in particular. Short useful sections are devoted to the history and dangers of the gas, and lead up to calcium carbide furnaces. Five types are briefly described, while a sixth, which is a continuous furnace, is described in detail.

The chemical theory of the generation of the gas from the carbide, and the purification of the acetylene when obtained, are touched upon sufficiently to pave the way to generators. Of these 25 forms are described and illustrated, being divided into three classes—viz., generators in which a measured quantity of water is added gradually to an excess of carbide, generators in which the carbide is alternately immersed in and withdrawn from the water, and those in which measured quantities of carbide are dropped into a large volume of water. There are two eight-page sections dealing respectively with acetylene lamps and burners.

An account of the author's experiments, illustrated by cuts of his generator, brings us to the "Conclusion," which is devoted to eulogising the cuteness of the Americans and American inventors, and a homily on the foolishness of the public being content with flimsy, cheap generators, when safe and efficient generators are not lacking. The "Addenda" includes a description of a small portable generator which the author has "finally developed" to meet "an increasing demand"; a copy of the New York Board of Fire Underwriters' Regulations for Acetylene Installations and Carbide Storage; and a list of U.S.A. patents referring to carbide furnaces and acetylene generators from January, 1893, to February, 1898.

Chemical Analysis. By W. Briggs and R. W. Stewart. pp. 128. London: W. B. Clive. 1898. 3s. 6d.

This little book deals with elementary qualitative analysis, and devotes 15 pages to a little volumetric work. It is professedly not a cram book, but is intended for students to work through by themselves. It is one of the University Tutorial Series, which seem to be compiled by the staff of the University Correspondence College, a brief prospectus of which is sent with the book. Some of the worst features of cram books are absent, but the work has obviously been framed to meet the particular requirements of the Correspondence College pupils for examination purposes. There is nothing noteworthy or commendable about the qualitative portion, the tables, type and arrangement being stereotyped in more senses than one. The notes on the analysis of mixtures are the redeeming feature of the book. The introduction of a little volumetric work is now becoming popular in elementary books of this class. The practice is highly commendable, but the execution in this case is far from satisfactory.

Etude sur les Combustions Spontanees. By E. T. de Grandsaignes. 253 pp., with index. Paris: Baudry et Cie. 1898. 6s.

This somewhat extensive *brochure* is divided into two sections. The first consists of a collection of authoritative opinions on cases of spontaneous combustion—real and imaginary—and precautionary measures to be observed. The various substances dealt with are classified under such headings as chemical compounds, fatty matters, minerals, vegetable materials, and textiles. The second part consists of a summary of the laws for the management of works in which dangerous materials are made, and the regulations in force for the transit of chemicals, cotton, coal, etc, by rail and sea. As a work of reference this *brochure* will be found very useful to shippers and others, who are not personally acquainted with the properties and possibilities of the numerous bodies which are liable to spontaneous combustion. It will also be useful to warehousemen and merchants who are anxious to appraise their insurance risks and rates.

Pharmaceutical Formulas, by P. MacEwan. 664 pages, including index. London: The *Chemist and Druggist* Offices, 1898. 7s. 6d. net.

The first 440 pages of this work are devoted to a collection of recipes for compounding toilet preparations, dentifrices, perfumes, preparations for the hair, household requisites, disinfectants, inks, varnishes, confectionery, &c., the rest of the book is devoted to gallenical and medicinal prescriptions.

It is a most valuable work for the intelligent trader, who is able to appreciate scientific accuracy. It does not pretend to teach by rule of thumb, methods which can only be carried out by those possessing at least a modicum of technical knowledge. The introductions to the various sections, such as inks, ærated beverages, &c., are well written, and often historically, as well as practically, interesting. Numerous hints and suggestions for putting up and labelling cheap "lines" are given, and add considerably to the value of the recipes. The classification of the latter is good, while the ample and accurate index is most convenient in cases of urgency. The customary pharmaceutical signs are used throughout, but are "translated" for the uninitiated in the editorial note which precedes the recipes. The book abounds in evidences of careful selection as regards the formulas, and there are practically no duplicates. In this way, and on the score of accuracy, it is one of the best technical recipe books we have met with. Of the gallenical and medicinal section we have nothing to say, as it does not come within our sphere.

MERSEY AND IRWELL JOINT COMMITTEE.

A MEETING of this authority was held in Manchester on Monday. Mr. Ald. C. Brierley presided. Mr. T. W. Killick said the Royal Commission on the disposal of sewage intended to visit a number of sewage works in this watershed early in October. They did not intend to take evidence; their object was to see some typical works in operation. He moved that the Chief Inspector be instructed to give what help he could to the Commission during their visit. This was agreed to.—At the previous meeting of the Committee, the Clerk was instructed to inform the Leigh and Atherton Joint Sewage Board that if any further complaints were received with respect to pollution, proceedings would be taken against them. A letter had since been received from the Joint Board stating that it had been arranged to begin the treatment of sewage in the tanks at the new works. Mr. H. W. Wilson said an inquiry was to be held next Monday with regard to the incorporation of Leigh, and one of the questions which would come up would be the disposal of the sewage of the district. It was agreed that Mr. Wilson should attend and represent the Joint Committee.—The Clerk was instructed a month ago to inform the Withington District Council that further works were necessary to ensure the efficient treatment of their effluent. The Chief Inspector now reported that a scheme for dealing with the sewage of the district had been prepared, but before taking any active steps the Council wished to be allowed to wait until the report of the Royal Commission was published. This request, the Sub-committee considered should not be entertained for a moment.—Mr. Alderman J. Brierley: I do not think there is any member of this Committee young enough to wait for the report of the Commission.—(Laughter).—

Mr. Killick said that if an offence had been committed and no steps were being taken to stop it, Withington ought to be prosecuted.—The Chairman thought it ought to be clearly understood, not only in this case but in all others, that the Joint Committee would not suffer any delay to take place on the ground that a report might be expected from the Royal Commission.—Mr. Tatton (chief inspector) said that for some time the sewage farm of the Withington Council had been overworked. He thought it would meet the case if the Council were informed that their request could not be entertained. The effluent from the sewage works during the autumn, winter, and spring months was usually good; it was only during the summer it was bad.—It was decided in the meantime to write to the Withington Council in the sense indicated by Mr. Tatton. The chief inspector reported that he had received several complaints lately with reference to the polluted condition of the Black Brook. The sub-committee understood this was principally caused by the discharge into it of the drainage of some houses and a jam factory within the district of the Reddish Urban District Council. As no doubt there was considerable ground for complaint, the sub-committee recommended that the clerk be instructed to write and inform the Reddish Urban District Council that unless steps were immediately taken by them to stop the pollution complained of proceedings would be taken by the Joint Committee.—This was agreed to.—The chief inspector had also received complaints as to the pollution of the river Bollin by the discharge into it of the effluents from silk manufactories in Macclesfield. The sub-committee understood that eventually the Corporation proposed to take these effluents into the sewers, but as no steps had as yet been taken in this direction they recommended that the clerk be instructed to write to all the manufacturers concerned, informing them that they must immediately take steps to arrange terms with the Corporation on the subject.—The recommendation was accepted by the Joint Committee.—Sir Henry Roscoe, in his report to the sub-committee, sent analyses of 33 samples of sewage effluents from the works of local authorities. Of these fourteen were good, five fair, eleven unsatisfactory, and two bad. The two bad samples were from Manchester and Salford; the unsatisfactory samples were from the sewage works of Bucklow Rural Council (Hale, upper outlet), Bucklow Rural Council, (Dunham Massey), Bury Rural Council (Tottington), Royton Urban Council, Hollingworth Urban Council, Westhoughton Urban Council, Kearsley Urban Council, Tyldesley Urban Council, Altrincham Urban Council, Knutsford Urban Council, and Norden Urban Council.—The clerk was instructed to write to all these authorities.

VISIT TO AN ALUMINIUM FOUNDRY.

DURING the summer meeting of the Institution of Mechanical Engineers at Derby recently, a large number of the members took advantage of an invitation from the directors of the British Aluminium Co., Ltd., to visit their rolling mill and foundry at Milton, Staffs. During the visit a large aluminium pan was cast weighing about 9 cwts., and which was to be utilised in connection with the manufacture of acetic acid. The visitors also saw a large cast aluminium pan weighing about 10½ cwts, and cover for same weighing about 4 cwts., together with several other large castings all in pure aluminium, in addition to a large pure aluminium still coil 2ft. 6in. centre to centre of tube, 13½ coils, 16 g. tubing, 1¼in. dia. with junctions, and 6 in. flange plate, all for acetic acid plant. The members also examined several large bronze castings, such as propellers, piston valve bodies, etc., for torpedo boat destroyers.

In a separate room were a number of different articles made by various firms from aluminium supplied by the British Aluminium Co., Ltd., such as, for instance, cast and spun cooking utensils, kettles, etc., made by Messrs. The Falkirk Iron Co., Ltd., Falkirk, N.B.; Messrs. R. Perry, Son, and Co., Ltd, Wolverhampton; Messrs. Jones. Bros. and Co., Ltd.; Wolverhampton; and Messrs. S. J. and E. Fellows, Ltd., Wolverhampton. A large number of specimens of aluminium soldering were on view, amongst which were two aluminium bicycles made by Mr. H. W. Nield, 89, Blackheath-road, London, S.E. (which we understand have been in constant use for two years without any sign of the soldered joints giving way), also a lot of art metal work by Messrs Hardman, Powell, and Co., of King Edward's-road, Birmingham. There was a good selection of electric light fittings made by the Edison-Swan United Electric Light Co., Ltd., for use aboard ship. A large assortment of ship and cabin fittings—such as door knobs, hinges, rail brackets, hooks, door bolts, finger plates, escutcheons, railway carriage fittings., etc.—manufactured by Messrs. J. Cartland and Sons, Messrs. Hoskins and Sewell, Messrs. Wm. McGeoch and Co., all of Birmingham, together with a large number of rough castings for general engineering purposes were on view. These and other polished fittings were all made with the British Aluminium Co.'s No. 6 aluminium alloy, which is admirably suited for such work, and which appears to be very extensively used in the brass and engineering trades throughout the country.

Selected Correspondence.

PATENT LAW.

(To the Editor of The Times.)

SIR,—With reference to the leading article in *The Times* of Wednesday this week, we think you should, in justice to our clients, Farbwerke vormals Meister Lucius and Brüning, correct the allegation that they took advantage of their patents to create a monopoly adverse to home industries.

On the first day of the hearing of the petition our clients' counsel pointed out to the referee that the invention was not being worked in this country because there was no demand for the article, but offered to manufacture in England if Messrs. Levinstein would order a *minimum* of 10 tons per annum, a fifth of the quantity represented by the *minimum* royalty of £250. mentioned in the order of the Board of Trade. It is true that in making this offer it was proposed to charge a royalty of, roughly, 3d. per pound—that is, about 10 per cent. on the cost of manufacture, which is by no means excessive as a patent royalty. Further, if our clients were absolved from the expense of establishing works here and Messrs. Levinstein would order a *minimum* of 25 tons per annum, they offered to supply it to them at the same prices as were current in Switzerland, an open market subject to full competition.

We think these offers were quite reasonable, and had they been accepted the serious expense of prosecuting the petition might have been saved.—Yours obediently, ABEL AND IMRAY.

Birkbeck Bank Chambers, Southampton Buildings,
London, W.C., Aug. 10.

(To the Editor of The Times.)

SIR,—In your issue of to-day's date Messrs. W. P. Thompson and Co. call public attention to the order recently made by the Board of Trade on the petition of Levinstein and Levinstein, Ltd., supported by the Manchester Chamber of Commerce, on German patentees that they, the patentees, should grant a compulsory licence to our clients the petitioners. They point out that the petitioners might have proceeded under the Statute of Monopolies, and we think it right, therefore, to say that before filing the petition and two others we had given the question of this alternative procedure most careful thought and consideration. Perhaps a perusal of Mr. J. W. Gordon's "Monopolies by Patents" may tend to make it clear why the course by petition was adopted. In any case, we cannot trespass on your hospitality so far as to attempt to justify the procedure, nor should we have troubled you with the present communication but that we think it right that the cost of obtaining the desired relief should be known, apart from the very serious risks to which your correspondents have called attention. To obtain this licence has cost the parties not less than £4,000., whilst the cost to the Board of Trade must have approached, if it did not exceed, £1,000. It will be evident, then, that this "very unsatisfactory clause of the Patents Act," or the procedure under it, needs careful amendment before it can be publicly useful.—Yours truly,

W. E. HEYS AND SON.

70, Market-street, Manchester, Aug. 10.

ANSWERS TO CORRESPONDENTS.

W. C.—Please notify if there is any further irregularity.

C. U.—By post.

P. C. Co.—It is not easy to render you any direct assistance. Works of reference are but little use in such cases. It is not quite clear what you mean by 'yield.' Colour, quantity, boiling point, or what? Why not try our correspondence columns?

B. A. Co.—Thanks for information. The other matter had received attention.

VALIDITY OF BRITISH ENTERPRISE IN RUSSIA.—The anxiety which has been felt by those interested in Anglo-Russian petroleum companies as to the status of their companies in the dominions of the Czar has now been set at rest. M. Wilenkin, the Acting Agent-General of the Imperial Ministry of Finances of Russia in London, who, some two months ago, pointed out the necessity for English companies, desiring to own and work petroleum lands in Russia, to absolutely conform to the laws of that country, now announces that the petitions and memorandum and articles of association of the Russian Petroleum and Liquid Fuel Co., of the Baku Russian Petroleum Co., and of the Schibaieff Petroleum Co. have been approved by the Imperial Government, and the companies named are now legally recognised in Russia. It is satisfactory to find that, whatever antagonistic spirit may be displayed towards Great Britain by Russia in other directions, there is apparantly no wish to check the development of that company's industrial resources by the aid of English capital.

Trade Notes.

The Owens College Students' Bazaar.—In addition to the "chemical stall" referred to last week, we are pleased to announce that the following stalls have been arranged for :—"Arts and Law," president, Mrs. Hopkinson ; "Physics and Engineering," under the care of Mrs. Core, Mrs. Hans Renold, Mrs. Osborne Reynolds, and Mrs. Schuster ; "Natural History," president, Mrs. Donner ; three "Medicine" stalls ; "Women's Department," president, Mrs. Schwann ; "Dalton Hall," presidents, Mrs. Graham, Miss King ; a flower stall, president, Mrs. Meek ; a book stall, president, Prof. Weiss, and a a photographic stall (by Members of the College Photographic Club). Suitable gifts will be welcomed by the presidents of all the above stalls, and contributions or loans for the "chemical" stall will, we trust, be plentifully showered upon Mrs. Levinstein, Mrs. Dixon, and Mrs. Perkin at the addresses given in our last issue.

Nitrate Statistics.—The Permanent Nitrate Committee's public statistical circular for August states : Nitrate of soda—Total exports to Europe, July, 1,421,000 quintals ; loading for Europe, August 1,900,000 quintals ; imports Europe, July, 52,190 tons ; deliveries Europe, 41,410 tons. Visible supply Europe, August 1 : stocks and afloat, 249,180 tons.

Rival Soap Makers.—The case of Crosfield v. Sharp Brothers' Soap Perfumery Co, Limited, rival soap manufacturers, was again before Mr. Justice Stirling in the Chancery Division this week. His Lordship said the defendants' undertaking should be accepted by the plaintiffs, who carry on business at Warrington, as sufficient till the trial—defendants in future to distinguish their soap from the plaintiffs' by selling it in white tablets and in wrappers to be identified, this to be without prejudice to any question. Plaintiffs also gave an undertaking in regard to damages.

Residuals of the Gas Light and Coke Co.—Coke has given a very good return in the past half-year, there having been a rise in its price of 1s. 4d. a ton, a figure which compared favourably with other companies, and which had brought this company in an additional £30,000. This improvement was not only fully maintained to this date, but the directors have just settled their Beckton coal contracts for the coming twelve months at prices which would result in much more favourable figures than those of the past half-year. The return under the head of tar has been slightly less than the figure of June, 1897, but ammoniacal liquor and its products showed a considerable improvement over the corresponding figures of last year. This was due not only to the better market price of sulphate of ammonia, but also to new and improved methods of dealing with the ammoniacal liquor, for which they are greatly indebted to the manager of their products works.

A Sulphate Cargo Dispute.—In the Queen's Bench Division, last week, before Mr. Justice Bigham, sitting for the trial of commercial causes, the case was heard of Hecker and Co. v. The Cunard Steamship Company, Limited. This was an action brought by Messrs. Hecker and Co., exporters, of London, to recover damages for a breach of contract entered into with the defendants to convey 30 tons of sulphate of ammonia to an Italian firm in Bologna. The ship was to sail for Venice. According to the case for the plaintiffs, the agents for the steamship company had constantly called upon them soliciting their carrying orders. The plaintiffs received an inquiry from the Italian firm in Bologna for the sulphate of ammonia, for the supply of which plaintiffs entered into a contract with the Sheffield Gas Company. They rang up by telephone the representatives of the Cunard line in London, and eventually it was arranged that the ammonia should be shipped by the Aleppo, which sailed on the 18th March last. The goods, at the request of the defendants, were forwarded from Sheffield to the Canada Dock, Liverpool. The Aleppo sailed on March 18th without the goods, whereupon the plaintiffs wrote holding the defendants responsible. The reply of the Cunard Company was that by the footnote at the end of their circulars they were not liable for any goods which were not received alongside in time. It appeared that the plaintiffs had asked the defendants to sample and weigh the ammonia, and it was alleged, on the part of the shipping company, that this process had delayed the arrival of the goods alongside. It was further stated that sulphate of ammonia exuded damp, and that to put it on the top of cargo would have been to injure other goods. His Lordship refused to allow the defendants to plead that the goods were not brought alongside in time because of the weighing, holding that it was a defence thought of at the last moment. In the result the jury found that there was a contract that the goods should be shipped by the Aleppo, and awarded the plaintiffs £1 damages. Judgment accordingly.

The Naphtha Fire near Baku.—A great naphtha fire has broken out near Baku. It has destroyed fifteeen derricks, including engines and pumps, and about two and a half million poods of crude petroleum. A second fountain commenced spouting, and is also burning.

Match Factories in France.—The matchworks at Prado, Marseilles, are the most modern of the three Government works, having been built only two years ago In the factory are employed 460 women and 80 men. Here are made all the wax matches that are sold in France ; but, although Marseilles is the seat of the manufacture of vestas, it still makes a larger number of ordinary wooden than wax matches. No safety matches are made there. The health register at Prado shows that on an average twenty-two to twenty-three workpeople are absent every month, having been suspended on account of illness. The dangerous processes were the mixing, dipping, and the putting in boxes. While theoretically the mixing of the composition and the tipping of the matches should be the most dangerous, yet, as a matter of experience, the boxing, when done by hand, causes more ill-health than the others. It is forbidden to take food or drink into the workshops. Any worker absent through ill-health or on account of treatment for a mouth affection cannot resume work without a certificate from the doctor to the factory stating that work can be resumed without risk to health At Pantin and Aubervilliers the workpeople are examined by a physician employed by the State for these works, twice a year at intervals of six months. Any man or woman who has a carious tooth is suspended should the doctor consider it advisable, and if such an individual is working in a department where chemical matches are made, total exclusion from work is the rule, but the individual is allowed to work in such other departments as are considered harmless. All workers suspended by the doctor receive three-fourths of the wages they were making at the time. Since a severe scourge of industrial phosphorism in 1895 the French Government has left no stone unturned to introduce new methods of manufacture and to replace white phosphorus by harmless substances. Experiments with this object in view have been encouraged, and invention stimulated by financial aid from the national purse.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are nominally a shade firmer at 9½d. for 90's and 50/90's. Carbolic acids are quiet, and crude 60%, is the turn easier, at 1s. 11d. Naphthas are unchanged. Anthracene is quoted 4d. for 30% A, and 3d. to 3½d. for B. Creosote keeps fairly steady, and in fair request at current values. Pitch moving better at 24s. f o b. East Coast.

Sulphate of ammonia is steady. The demand has been more active, and in consequence prices have speedily responded to the advanced tone of the market. Beckton quotations for forward remain unchanged from last week as regards January/March October is now quoted £9 11s. 3d., and November/December £9. 8s. 9d. For prompt, Beckton has sold at £9. 12s. 6d. London outside makes are quoted £9. 15s. ; Liverpool, £9. 13s. 9d. ; Hull, £9. 12s. 6d. ; and Leith, £9. 15s.

MISCELLANEOUS CHEMICAL MARKET.

Business in the alkali trade is somewhat better, as there is more doing for export. Caustic soda, however, is rather depressed, owing to large stocks on hand, and current quotations are :—f.o.b. Liverpool, 77%, £8 ; 74%, £7. 15s. ; 70%, £7. 2s. 6d ; 60%, £6. 2s. 6d , nett, per ton. For future delivery there is rather a lower tendency in price. Bleaching powder is moving more freely at £5. 10s., hardwoods, f.o b. Liverpool, and £5., softwoods, f.c.r. makers' works. Ammonia alkali steady at £4. 2s. 6d , bags, f o r. Saltcake has advanced, and is firm at 25s. f.o.r. in bulk. Chlorates rather firmer : potash 3⅜d. to 3½d. per lb. ; soda 3⅜d. to 3¾d. per lb. Sulphate of copper is steady at £16. 10s. f.o.b , with more inquiry and business doing for forward delivery. Yellow prussiate of potash is rather lower at 6⅜d. per lb. Cyanide 1s. 2d. per lb. Prussiate of soda, 5⅛d per lb. Potash, caustic and carbonate are in good general request, and prices are unchanged. White powdered arsenic is selling more freely at £14. 5s. to £14. 10s. Garston. Brown acetate of lime steady at £5. 5s., and grey £7. 10s. c.i f. In acetate of soda there is more business doing at £12. c.i.f. Sugar of lead is quiet in all qualities. Nitrate of lead in fair demand at £20. per ton. Nitrate of soda is firm at 7s. 4½d. to 7s. 6d. per cwt. Nitrite of soda 98%, £25. to £25. 10s. per ton. Borax, £12. 10s., and quiet thereat. Green copperas moving more freely at 24s. to 25s. per ton, delivered. Bisulphide of carbon dearer at £10. 10s. per ton. Sulphur steady at £4. 12s. 6d. f.o.r. Sulphocyanides dull. Carbolic acids are quiet, though prices are unaltered. Reports, generally, indicate a slackness of trade in all districts.

REPORT ON MANURE MATERIAL.

Although the market continues quiet, prices both for nitrogenous and phosphatic material remain very steady.

There have been considerable sales of Florida phosphate 75/80% to the Continent, and as the wants there appear to be far from satisfied, raisers have now advanced their price for good U.K. ports to 7d. per unit, c.i.f. Quotations for South Carolina and similar grade Algerian are unchanged at last quotations.

In the absence of further cargoes of River Plate bones offering, there is no business to report. There are sellers of Bombay bone meal at £4. 10s. per ton, ex quay, autumn shipment; but at present this is above buyers idea of value.

Nitrate of soda is steady at 7s. 6d per cwt. for ordinary, ex store, and at 7s. 7½d. per cwt. for fine quality ex quay.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron steady: Scotch warrants closed at 46s. 9d.; Middlesbro', 41s. 0½d cash; and hematite, 52s. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed at £51. 2s. 6d. to £51. 7s. 6d. cash, and £51. 8s. 9d. to £51. 13s. 9d. three months. Tin steady: Straits closed at £74. 10s. od. to £75. 0s. od. cash, and £74. 17s 6d. to £75. 7s. 6d. three months; Australian, £75. 5s. od.; English ingots, £77. 10s. od. Lead firm: Spanish, £12. 18s. 9d., English, £13. 2s. 6d.; Silesian spelter, ordinary, £20. 3s. 9d. to £20. 5s. od. Nickel, 1s. 2½d. Antimony, £37. 0s. od. Quicksilver: First hands, £7. 12s. 6d.; second hands, £7. 12s. *Copper shares* steady: Cape, 4 9/16 to 4 11/16; Copiapo, 2¼ to 2⅜; Libiola, 1⅞ to 2⅛; Mason and Barry, 3 5/8 to 3⅞; Rio Tinto, 28 7/16 to 28 9/16; Tharsis, 6½ to 6¾.

GLASGOW, Wednesday.—Market steady; moderate business; Scotch done at 46s. 9d. cash and 46s. 11d. and 46s. 11½d. one month; buyers, 46s. 9d.; sellers, 46s 9½d. Cleveland done at 41s. 1½d. nine days and 41s. 3d. one month; buyers, 41s. 0½d. cash; sellers, 41s. 1d. Cumberland hematite done at 52s. and 52s. 1d. cash and 52s. 3d. one month; buyers, 52s. cash; sellers, 52s. 0½d. Middlesbrough hematite, buyers, 51s. 6d. cash; sellers, 51s. 10½d.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is quiet, Lagos being done at £21 per ton transit. Olive is a very firm market, although prices are against sellers, and the demand is steady. Linseed keeps firm at 17s. 9d. to 18s 6d. cwt. for Liverpool makes in export casks. Cottonseed 15s. 9d. to 16s. 3d. for Liverpool refined. There is very little doing in castor oil, but holders are steady at 3¼d. for good seconds Calcutta, and 3d. per lb. for French and Madras, spot. Tallow is steady and finding buyers without much difficulty. Resin is moving quietly on spot, for all grades, without any material change from last quotations. There is a moderate business passing in spirits of turpentine at 22s. 6d. cwt. Petroleum is quiet, with Russian at 5d. and American 5⅞d. to 7¼d. per gallon.

CAKES.—There is a better tone in the market for all descriptions and the tone is quite steady, but so far no improvement in values has been established. There has been a fair amount of trade concluded for American Western linseed, the quotation being still given at £5 13s. 9d. to £6. 2s. 6d., and Liverpool makes have also met a fair inquiry at £7. to £8. per ton, according to brand. Decorticated American cottonseed meet a steady demand for good to choice brands, and sellers are asking £5. 5s. to £5. 17s. 6d. per ton, according to quality. Liverpool makes both of decorticated and undecorticated are unchanged at £5 15s. to £6. 10s. for the former and £3. 15s. to £4. 10s. per ton for the latter, with rather more inquiry. The market for spot parcels of Egyptian is very steady, with a fair demand experienced and sellers asking £3. 12s. 6d. to £3. 15s. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—Linseed oil shows some little improvement, being about 2s. 6d. to 5s. per ton dearer, and refined cotton oil has a more decided value upon the market. The stocks of seed held in Hull month ending July were—Linseed, 3,580 qrs. against June 2,334 qrs.; rapeseed, 164 qrs. against 67 qrs.; cottonseed, 1,685 tons against 1,685 tons; whilst the imports during the month—linseed, 58,950 qrs. against 27,054 qrs., making a total for the year of 225,604 qrs. against 368,919 qrs. a year ago. Rapeseed, 5,883 qrs. for the month, against the previous month 5,214 qrs., making total for the year 43,314 qrs. against 55,489 qrs. a year ago Cottonseed, 6,223 tons against 4,546 tons the previous month, making total for the year of 116,751 tons against 120,676 tons a year ago. Linseed oil is quoted spot 15s. 9d. naked; forward month 15s. 7½d.; last four months, 15/-. Boiled and refined, £1. to £1. 10s. per ton, extra. Refined cotton oil, spot, naked, 13/7½, the same being value for month; forward, Nov./April, 13/3, naked; barrels, £1. 10s. per ton and ordinary casks £1. per ton extra. Olive oil is quoted £30. 10s for Spanish oil. Castor oil, extracted here, £28 10s. per ton in barrels; 3 1/16d. per lb. for first pressure; £27. 10s. in barrels; 3 1/16d. per lb in cases for second pressure. Cod oil, £16. to £1⁸. per ton. Resins unchanged. Yorkshire grease, £7. 10s. to £9 per ton.

CAKES.—The market prices are firm, but stocks are necessarily limited. Linseed cakes firm, 95% pure, £7 2s 6d. to £7. 5s. per ton. Oilcakes (linseed), £6. 2s 6d. to £6. 5s.; Russians, £6. 15s. to £6 17s. 6d.; Americans, £6 7s. 6d. to £6. 12s. 6d. Cotton cakes are also firm; best makes, £4 to £4. 1s. 3d.; seconds, £3. 17s. 6d. to £3. 18s. 9d. Rape cakes are also firmer in tone; Black Sea, £3 17s. 6d. to £4. per ton.

PAINTS.—Makers continue well employed, yet in the export branches there is room for some improvement. Prices are unchanged. Also the same applies to disinfectants.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

The heads of the mineral oil industry of Scotland met last week in accordance with annual custom at this period of the year, to deliberate on the position of burning oil over the incoming new season Last year, this meeting was inconclusive, because of a considerable conflict of opinion, and it broke up on the basis of every maker according to his own fancies. This year, the feeling was more workable in character, and an agreement was come to for an advance of about one farthing per gallon, the present condition of American quotations seeming to warrant that. The newly raised figures are now as stated below. Sulphate of ammonia moves very slowly, owing to the views of most of the makers being too high for the buyers Some of the former want £9. 12s. 6d. for prompt Leith, while the latter stop at about £9. 10s. Common chemicals are for the most part unchanged and rather quiet. Sulphate of copper is firm.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s 6d. net Tyne, soda ash, 48/52°, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, 48/52°, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 10s. to £5. nett, Glasgow; caustic soda, white, 74° £7. 15s. od, 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s od. nett, Tyne; saltcake, 25s od.; borax, English refined, £14., and boracic acid, £24. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d, and 1-cwt. casks, £6. 15s.. nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d nett, f.o.b. Glasgow); chlorate of potash, 3½d less 5%, Liverpool; nitrate of soda, 7s. 6d to 7s. 9d.; sulphate of ammonia, £9. 10s. od. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £16. 10s. od. less 5% Liverpool; paraffin scale, hard, 1¾d. to 1½d. per lb., soft, 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb.; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 6d., and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5 0s., 885° £5. 10s. to £6. and 890/895° £6 5s. to £6. 15s. Week's imports of sugar at Greenock were 400 hogsheads and 8,730 bags cane unrefined; 3,600 bags beet unrefined.

TYNE CHEMICAL REPORT.

Tuesday.

Chemicals continue quiet with slow demand. Soda crystals are steady at £2. 12s. 6d. per ton, gross weight, locally. Sulphur firm at £5. per ton. Caustic, 70%, £7. 5s. per ton; 76/77%, £8. per ton. Other products unchanged.

Bleaching powder, softs, £5. 10s. per ton, nett; do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8 to £8. 5s. and 70% £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. 0s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white

alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. per ton nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues very brisk for both coal and coke, and the supply is barely equal to the demand. For best Northumbrian steam, 14s. to 15s. per ton is asked. Gas coals are firmer with strong inquiry. Best Northumbrian steam, 14s. to 15s. per ton; second qualities, 13s to 14s. per ton; small steam, 6s. 6d. to 7s. per ton; gas coals, 11s. to 12s. per ton; household coals, 10s. to 11s. per ton; coke, 18s. 6d. to 21s. per ton.

New Companies.

Griffiths' Drysaltery Co., Ltd.—CAPITAL £2,000. in £1. shares. This company has been formed to carry on the business of drysalters, chemists, druggists, oil and colourmen, etc. The number of directors is not to be less than 2 nor more than 7. The first are R. Cochrane, J. Lyon, J. Brown, C. Kerr, H. Kerr, E. Menken, and A. T. Broughton. Qualification £100. Remuneration as fixed by the company.

Barbadoes Oil Co., Ltd.—CAPITAL £10,000. in £1. shares. This company has been formed to adopt an agreement with E. Fidler, and to acquire, own, and work bitumen, manjak, petroleum, and other oil wells, springs, mines, etc., in the West Indies, or elsewhere. The number of directors is not to be less than 2 nor more than 7; the first are H. Watts, E. Fidler, and W. E. Rowlands. Qualification, 50 shares. Remuneration as fixed by the company.

Palmer & Co., Ltd.—CAPITAL £56,250. in £1. shares (45,000 6% cum. pref.). This company has been formed to acquire the business of Palmer and Co., Ltd. (incorporated in 1891), and to manufacture and deal in candles, soap, wax, tallow, oil, glycerine, etc. The subscribers to the memorandum of association are:—F. H. Davey, 41, Grosvenor-road, Ilford, mariner; A. Pinkney, 3, Carnarvon-road, Stratford, E., clerk; A. E. Webb, 95, Monega-road, Forest Gate, E., clerk; T. G. Magrath, 9, Carnarvon-road, Stratford, E, clerk; W. Chalk, 6, Keogh-road, Stratford, E., clerk; J. J. Scott, 55, Claremont-road, Forest Gate, E, secretary; P. W. Tyler, 9, Broad-street, Stratford, E., clerk.

Utilitarium, Ltd.—CAPITAL £10,000. in £10. shares. This company has been formed to acquire and carry on the business of R. Lamont & Sons, drysalters, oil and colourmen, and general merchants, of Market-lane, Kilmarnock, and Newmarket-street, Ayr. The subscribers to the memorandum of association are:—R. Lamont, London-road, Kilmarnock, merchant; A. Lamont, London-road, Kilmarnock, gentleman; J. Hood, John Kinnie-street, Kilmarnock, cabinet maker; A. Hood, John Kinnie-street, Kilmarnock, cabinet maker; R. Gibson, Market-lane, Kilmarnock, traveller; J. Campbell, Market-lane, Kilmarnock, salesman; J. Barr, Kilmarnock, secretary.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 30th.

Acetic Acid—		
Holland,	51 pks.	A. & M. Zimmermann
,,	50	R. W. Greeff & Co.
Acetone—		
France	13 drs.	Thames S. T. & L. Co.
Germany,	6	Petri Brs.
Alkali—		
France,	45 c.	J. Barber & Co.
Belgium,	30	A. & M. Zimmermann
Alum—		
Holland,	1,399 pks.	A. J. White
Antimony Ore—		
Germany,	55 t.	Fielder & Co.
Turkey,	75	Hallett & Co.
Portugal,	3	J. Silva & Co.
Antimony Sulphide—		
France,	6 cks.	Petri Brs.
Arsenic—		
Portugal,	19 brls.	Coverly & Westray
Germany,	10 cks.	Brit. Anti-Fouling P. Co.
Asbestos—		
Germany,	£25	S. Taylor
Barium Chloride—		
Germany,	100 sks.	Petri Brs.
Baryta—		
Germany,	20 kgs.	G. Boor & Co.
Barytes—		
Germany,	22 cks.	R. W. Greeff & Co.
,,	96	J. L. Lyon & Co.
Belgium,	94	,,
Holland,	43	P. Jantzen
,,	57	159 pks. W. Harrison & Co
Bleaching Powder—		
Holland,	40 cks.	J. M. Steel & Co.
Bone Meal—		
Russia,	30 t.	Lawes Chemical Manure Co.
Bones—		
Sydney,	18 t.	C. A. & H. Nichols
Russia,	100	Anglo-Contl. Guano Wks.
Germany,	15	E. Groschke
Gibraltar,	50	Fox, Roy, & Co.
E. Indies,	359	A. Hunter & Co.
Caoutchouc—		
Straits,	27 c.	Elkan & Co.
U. States,	19	L. & I. D. Jt. Co.
France,	192	H. Johnson & Sons
Africa,	23	Brooks & Green
Straits,	711	L. & I. D. Jt. Co.
,,	95	W. Pope & Co.
,,	440	Gilman Brs. & Co.
Zanzibar,	4	Clarke & Smith
,,	59	Hale & Son
E. Indies,	32	W. M. Smith & Sons
Germany,	70	Prop. Bull Wf.
Straits,	195	,,
,,	193	Huttenbach & Co.
,,	445	Soundy & Sons
Zanzibar,	177	L. & I. D. Jt. Co.
Germany,	12	,,
,,	20	Wallace Brs.
France,	40	Prop. Bull Wf.
Madeira,	95	W. Pope & Co.
E. Indies,	1	G. Williamson & Co.
Holland,	18	S. Figgis & Co.
Surinam,	30	H. Kiver & Co.
Africa,	65	L. & I. D. Jt. Co.
E. Indies,	169	J. W. Cook & Co.
,,	103	Kleinwort, Sons & Co.
Zanzibar,	30	Forbes, Forbes, & Co.
Holland,	18	W. M. Smith & Sons
Belgium,	61	J. Harrison
Sydney,	27	MacIlwraith & Co.
Germany,	42	F. Huth & Co.
Straits,	212	Butler's Wf., Ld.
Carbolic Acid—		
Germany,	30 pks.	J. M. Steel & Co.
,,	51	J. G. Back
Caustic Potash—		
Germany,	5 cs.	Vinolia Co.
,,	80 cks.	D. T. Domeier & Co., Ld.
Chemicals (*otherwise undescribed*),		
France,	£43	Mory & Co.
Belgium,	13	John Cockerill Line
Holland,	91	T. H. Lee
Germany,	80	L. & I. D. Jt. Co.
,,	1,046	A. & M. Zimmermann
,,	25	Butler's Wf., Ld.
,,	12	Craven & Co.
Holland,	15	R. W. Greeff & Co.
,,	15	J. Owen
Belgium,	220	T. Palmer
Germany,	89	R. W. Greeff & Co.
Denmark,	100	Crosse & Blackwell
Holland,	40	A. C. Lloyd
France,	35	T. H. Lee
Belgium,	55	,,
Sweden,	10	M. D. Co.
Holland,	18	Hernu. Peron & Co.
Citric Acid—		
France,	4 pks.	C. Christophersen
,,	12	B. & F. Wf. Co.
Cream of Tartar—		
France,	11 pks.	B. & F. Wf. Co.
Holland,	20 cks.	Kirkpatrick, Barr, & Co.
France,	25 pks.	W. C. Bacon & Co.
,,	1	H. Johnson & Sons
,,	5	M. Ashby, Ld.
,,	10	J. & A. Ferguson
,,	5	F. C. Devon & Co.
Dyestuffs—		
Annatto		
E. Indies,	19 pks.	Anderson, Weber & Co.
Argols		
France,	64 pks.	L. & Til. L. C. & D. Co.
Cochineal		
Canaries,	11 bgs.	Sperling & Williams
,,	27 pks.	Swanston & Co.
,,	10	W. M. Smith & Sons
Divi Divi		
E. Indies,	62 bgs.	Flack, Chandler & Co.
Aden,	73 pks.	Culverwell, Brooks & Co.
E. Indies,	105	Walker, Munsie & Co.
Extracts		
Germany,	210 bgs.	J. Grieg
Austria,	102 brls.	C. Hooper
,,	100	Boutcher, Mortimore & Co.
France,	44 cks.	Bennett S. S. Co.
,,	80	L. J. Levenstein & Son
Germany,	110 bgs.	Butler's Wf., Ld.
France,	100 cks.	B. & F. Wf. Co.
Germany,	20	T. H. Lee
Canada,	163 brls.	Boutcher, Mortimore & Co.
U. States,	100	S. Kilbeck Brs.
France,	25 cks.	Beresford & Co.
Canada,	55	Furness, Withy & Co.
Gambier		
Straits,	418 bgs.	Beresford & Co.
,,	922	Brinkman & Co.
,,	168	R. & J. Henderson
,,	252 bgs.	J. Swire & Sons
,,	326 bls.	,,
,,	739	Adamson, Gilfillan & Co.
,,	347	Brown & Elmslie
,,	481	J. Grieg
Indigo		
E. Indies,	51 pks.	J. W. Cook & Co.
,,	3 chts.	Arbuthnot, Latham & Co.
,,	9	A. Young & Co.
,,	11	Parsons & Keith
,,	18	Parry & Co.
,,	7	R. Von Glehn & Sons
Myrabolams		
E. Indies,	1,000 pks.	Montgomerie & Workman
Shumac		
Italy,	60 pks.	J. Kitchin, Ld.
,,	140 bgs.	N. Pope & Co.
Italy	200 bls.	Bailey & Leetham Ld.
,,	25 bgs.	J. E. Scott
Tanners' Bark		
Germany,	50 t.	Baxter & Hoare
Adelaide,	50	Union L. Co., Ld.
Austria,	100	J. Greig
Germany,	102	,,
Turmeric		
E. Indies,	44 bgs.	G. & H. Green
Velonia		
A. Turkey,	260 t.	Boutcher, Mortimore, & Co.
,,	52	Marshall & French
,,	30	Hicks, Nash, & Co.
,,	205	Anning & Cobb
,,	5	Pickford & Co.
Dyestuffs (*otherwise undes.*)—		
France,	8 bls.	Burnett, Brs. & Sons
,,	50	W. Burton & Son
U. States,	100 cs.	W. Dixon
Farina—		
Germany,	41 pks.	R. Ulrich
Holland,	50 bgs.	J. Barber & Co.
,,	50	F. Beck
Austria,	19 cs.	A. W. Latham & Co.
Holland,	60 pks.	J. Hurst
Austria,	14	G. Thompson
Italy,	2,321 bxs.	Wrightson & Son
Germany,	5 pks.	R. Bennett & Co.
Glucose—		
U. States,	100 pks. 575 c.	L. Norman & Co., Ld.
,,	3,950 7,876	R. G. Hall & Co.
,,	50 312	Union Lge. Co., Ld.
,,	100 570	H. Johnson & Sons
,,	100 570	A. E. Piggott
,,	100 600	C. Southwell & Co.
,,	50 280	Fellows, Morton, & Co.
,,	150 900	Soundy & Sons
,,	200 1,897	Lon. & Til. L. C. & D. Co.
,,	50 299	Farratt, Tagant & Co.
,,	100 563	Ohlenschlager Brs.
,,	100 600	W. Balchin, Ld.
,,	800 800	L. & I. D. Jt. Co.
,,	200 200	Yokins & Co., Ld.
Germany,	12 95	J. Knill & Co.

Glue—
Germany, £190 L. & I. D. Jt. Co.
" 725 J. Barber & Co
" 17 M. D. Co.
France, 20 Flageollet & Co.
" 16 Mory & Co.
" 60 W. Harrison & Co.
" 70 Prop. Hay's Wf.
Holland, 48 T. H. Lee
U. States, 45 Armour & Co.
" 12 L. & I. D. Jt. Co.

Glue Stock—
Germany, 23 bls Hicks, Nash, & Co.
France, 11 H. Johnson & Sons
N. Zealand, 5 T. J. & T. Powell
Germany, 5 Butler's Wf., Ld.
Belgium, 37 Leach & Co.
Germany, 5 Culverwell, Brook-, & Co.
Sydney, 10 Goad, Rigg, & Co.
Straits, 5 bskts. Hore & Scrivener
Spain, 81 sks. R. Hough
U. States, 160 bgs. Baxter, Schenkelberger, & Co.
" 56 L. & I. D. Jt. Co.

Glycerine—
France, £340 H. Hill & Sons

Gypsum—
Germany, 300 c. L. & I. D. Jt. Co.

Infusorial Earth—
Germany, £250 A Haacke & Co.

Iron Bromide—
Germany, 13 cks. A. & M. Zimmermann

Lactic Acid—
Germany, 2 pks Butler's Wf., Ld.

Lead Acetate—
France, £90 Beresford & Co.
" 12 cks. "

Litharge—
Germany, 8 cks. J. Barber & Co.

Lithopone—
Germany, 6 cks. H. Keller & Co.

Manganese—
Japan, 2 t. Cole & Carey
Germany, 3 Butler's Wf., Ld.

Manure—
Germany, 20 t. F. W. Berk & Co., Ld.

Methyl Alcohol—
U. States, 9 dms. H. Wallace & Co.
Germany, 20 W. Iszard

Mica—
Malaga, £1,430 Major & Field
France, 20 W. M. Smith & Sons
Canada, 17 —
U. States, 100 W. Dixon
" 160 Dundee, Perth, & London S. Co.
E. Indies, 2,385 W. M. Smith & Sons

Molasses—
U. States, 50 cks. 300 c. Carr & Son
" 225 1,175 C. S. Anderson
" 200 1,707 Seaward Brs., Ld.
" 100 580 Vokins & Co., Ld.
Holland, 766 4,400 J. R. Francis & Co.

Naphtha—
Germany, 22 dms. Sutton, Carden, & Co.

Nickel Salts—
Germany, £30 A. & M. Zimmermann

Ochre—
Holland, 27 pks. Phillipps & Graves
France, 20 L. & I. D. Jt. Co.

Oleic Acid—
France, 30 pks. Prop. Hay's Wf.

Paraffin Scale—
U. States, 1,570 brls. Anglo-American Oil Co., Ld.

Paraffin Wax—
U. States, 200 brls. Lon. & Til. Ltge. C. & D. Co.
" 300 Anglo-American
850 cs. Oil Co., Ld.

Pearl Ash—
Canada, 47 c. Charles & Fox

Phosphate Rock—
Belgium, 26 t. H. E Albert
" 165 Anglo-Contl. Guano Works
" 100 C. A & H. Nichols

Pitch—
Germany, 66 cks. L. & I. D. Jt. Co.
" 49 Poth, Hille, & Co.

Platina Ore—
Russia, 2 c. H. Grey, jnr.

Plumbago—
Ceylon, 735 brls. J. Swire & Sons
" 16 cks. S. D. Roper
U. States, 10 cs. Lunham & Moore
Ceylon, 135 brls. J. Thredder, Son, & Co.
" 108 G. R. Haller
" 250 Marshall & French
" 44 bls. "

Potash—
Germany, 25 kgs. R. W. Greeff & Co
Holland, 5 "

Potassium Bicarbonate—
Holland, 9 cks. A. & M. Zimmermann
Germany, 14 H. Lambert

Potassium Bromide—
Germany, 10 cs. R. W. Greeff & Co.

Potassium Carbonate—
France, 70 c. J A Reid
Germany, 200 F. W. Berk & Co . Ld.
" 150 Petri Brs.
" 600 J. M. Steel & Co.

Potassium Permanganate—
Belgium, 40 kgs. Petri Brs.

Potassium Prussiate—
Germany, 37 cks. Blagden, Waugh, & Co.
Belgium, 20 "
France, 37 J. Owen

Red Oxide—
Spain, 400 bgs. W. Harrison & Co

Rosin—
U. States, 900 brls. Williams, Torrey, & Co.
" 1,500 H. Hill & Sons
France, 27 B. & F. Wf. Co.

Rosin Oil—
France, 200 brls. Fleming's Oil & Chemical Co.

Salicylic Acid—
Germany, 16 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 16 cks. P. Hecker & Co.
" 16 L. & I. D. Jt. Co.
E. Indies, 1,133 bgs. Vokins & Co., Ld.

Soap—
U. States, £48 G. N. Wheatley & Co.
" 402 Prop. Fenning's Whf.

Soda—
U. States, 250 c. Furness, Withy, & Co.

Sodium Chlorate—
Sweden, 100 kgs. G. Boor & Co.

Sodium Hyposulphite—
Germany, 10 cks. Deering & Robottom

Starch—
U. States, 1,598 bgs. J. Forsey
Holland, 60 cs. Hernu, Peron, & Co.
Germany, 6 pks. Butler's Wf., Ld.
U. States, 540 C. Tennant, Sons & Co.
Holland, 50 bgs. Page, Son, & East
" 7,399 cs. Little & Johnston
" 25 Phillipps & Graves
Belgium, 895 E. & T. Pink
" 80 Pearce, Duff, & Co.
" 40 Taylor Brs.
" 160 Leach & Co.
" 200 C. Tennant, Sons, & Co
U. States, 100 Ohlenschlager Brs.
" 100 S. Kilbeck Brs.
Belgium, 20 Bullard, King, & Co.
" 420 Becker & Wagner
France, 40 J. Barber & Co.
U. States, 100 sks. Phillipps & Graves
" 449 bgs. R. Bennett & Co.
Belgium, 385 pks. T. H Lee
" 40 cs. "
Austria, 5 bls. M. D. Co.

Stearine—
Holland, 51 bls. J. Owen
Belgium, 63 bgs. H. Hill & Sons

Sulphur—
Italy, 12 t. Bremer, Bennett, & Co.
" 5 Gillespie Brs. & Co.

Talc—
France, £40 Blackwell & Co.
E. Indies, 224 A. B. Curtis & Co.

Tartaric Acid—
Holland, 51 pks. F. C. Devon & Co.
" 11 B & F. Wf. Co.
" 20 Kirkpatrick, Barr, & Co.

Tartars—
Italy, 103 cks. B. Jacob & Sons

Turpentine—
Germany, 9 bkts. H. Lambert
Austria, 1 ck. Nicholson's Whvs., Ld.
Italy, 5 Capt. Hayes

Ultramarine—
Germany, 30 pks. Steinhoff, Sons, & Co.
" 4 cks. J. Kitchin, Ld.
Holland, 1 pk. W. Harrison & Co.
" 20 Haeffner, Hilpert, & Co.
" 53 Thames S. T. & L. Co., Ld.

Varnish—
Germany, 10 pks. Butler's Wf., Ld.
Belgium, 5 Wilson & Co.
U. States, 10 Pinchin, Johnston, & Co.

Verdigris—
France, £22 B. & F. Wf. Co.

Waste Salt—
Germany, 10 t. A. Zumbeck & Co.

White Lead—
Belgium, 21 cks. J. L. Lyon & Co.
" 46 T. & W. Farmiloe, Ld.
Holland, 96 "
Germany, 19 Taylor Brs.
" 23 N. J. Fenner & Co.
" 49 Wilkinson, Heywood, & Co.
Austria, 10 cs. Grosscurth & Luboldt

Wood Pulp—
Sweden, 320 pks. Alsing & Co., Ld.
" 520 W. G. Taylor & Co., Ld.
" 400 W. E. Bott & Co.
" 1,250 Johnsen & Jorgensen
" 250 Tough & Henderson
" 160 G. Harburg & Co.
" 54 Henderson, Craig, & Co.
" 40 T. C. Creed
Germany, 10 Becker & Wagner
Holland, 56 Thames S. T. & L. Co , Ld.
" 54 C. S. Lovell
Portugal, 350 Page Son, & East
Norway, 1,680 J. Sharp
Canada, 200 Henderson, Craig, & Co

Zinc Chloride—
Holland, 10 cs. Phillipps & Graves

Zinc Oxide—
Holland, 2 pks. M. Ashby, Ld.
Germany, 50 "
U. States, 310 "
Germany, 103 Prprs. Dowgate Dk.
" 500 cks. Soundy & Sons
" 2 pks. H. Lambert
Sweden, 100 R. Greening

Zinc Sulphate—
Holland, £21 J. Barber & Co.
Sweden, 100 bgs. G A Steel
Germany, 32 cks. Burgoyne & Co.

LIVERPOOL.

Week ending July 28th.

Acetic Acid—
Rotterdam, 10 balloons

Aniline Salts—
Rotterdam, 4 cks.

Asbestos—
St. John's, N.B., 34 bgs.

Barytes—
Antwerp, 50 cks.

Benzine—
New York, 1,250 brls.

Bone Ash—
Campana, 560 bgs.
River Plate, 494 W. B. Dickinson & Co.
San Nicholas, 100 R. M. Hudson

Bones—
Cadiz, 403 sks.
Smyrna, 788 bgs.
San Nicolas, 92 R. M. Hudson
Boston, 25 brls.
Maranham, 70 bgs. Hugh Evans & Co.
Syra, 341 Ch. Nicholaidis
Ceara, 105 t. Gunston, Sons, & Co.

Caoutchouc—
Lisbon, 223 bgs.
Valparaiso, 105 brls. J. H. Schroeder & Co.

Castor Oil—
Calcutta, 404 cs. Ralli Brs.
" 245
Chemicals *(otherwise undescribed)*
Bordeaux, 3 cs.

Colours—
Hamburg, 20 cs.
Boston, 2 brls. Munsell & Co.
Fiume, 200 bgs.
Antwerp, 9 cs. 10

Cream of Tartar—
Oporto, 2 cks. J. M. Andrew Waddell
Bordeaux, 46

Dried Blood—
River Plate, 150 bgs W. B. Dickinson & Co.
San Nicholas, 218 R. M Hudson

Dyestuffs—
Cutch
Singapore, 1,000 bxs.
Hamburg, 5 cs.
Rangoon, 470 Barlng Brs. & Co., Ld.
" 1,650
Extracts
Bordeaux, 100 cks.
Fiume, 300 brls. Oak Extract Co.
" 408
Baltimore, 316
Marseilles, 150
Fustic
Trieste, 2 t.
Myrabolams
Bombay, 667 bgs. D. Sassoon & Co.
Shumac
Palermo, 650 bgs. 375 bls.
Tumeric
Calcutta, 10 bgs.
Valonia
C'stantinople, 3,062 bgs. Jivan Tekevan & Co.
Smyrna, 6,367 quin. Essayan
" 1,896

Farina—
Fiume, 200 bgs.

Glucose—
Boston, 200 brls. Duche & Sons
" 200 F. W. Simonds

Glue—
Fiume, 4 cks.
Naples, 100 bls.
St. Nazaire, 28 cks, 35 cs.
Rotterdam, 20 bgs. 3

Guano—
River Plate, 711 bgs.

Limestone—
Antwerp, 4 crts.

Manganese Ore—
Salonica, 1,015 t.

Naphtha—
New York, 7,516 brls.

Oxalic Acid—
Hamburg, 3 cks.

Paint—
Marseilles, 74 brls.

Paraffin Scale—
Rangoon, 103 bxs.
Baltimore, 100 brls.

Plumbago—
Genoa, 100 bgs.

Potassium Chlorate—
Marseilles, 69 cks.

Potassium Prussiate—
Marseilles, 50 cks.

Pyrites—
Huelva, 2,740 t. Matheson & Co.

Rosin—
Baltimore, 970 brls.
Savannah, 3,175

Salt—
Hamburg, 10 cs.

Saltpetre—
Calcutta, 1,010 bgs. Ralli Brs.

Soap—
New York, 5 cs. Colgate & Co.
Naples, 37

Soap Lye—
Marseilles, 53 dms.

Soapstone—
Bordeaux, 300 bgs. Geo. G. Blackwell & Sons
Genoa, 200

Sodium Nitrate—
Caleta Buena, 2,067 t.
Starch—
Montreal, 150 bgs.
Antwerp, 174 cs.
Stearine—
Antwerp, 13 bgs. J. T. Fletcher & Co
Tallow—
New York, 155 tcs. G. W. Rowley
" 50 hds.
Boston, 100 brls.
Campana, 391 pps.
Boston. 150 tcs. J. M. Mare & Co.
River Plate, 20 hds. 432 hf.-pps.
759 pps.
San Nicholas, 400 cks. R. M. Hudson
Tar—
Archangel 2,300 brls
Tartaric Acid—
Marseilles, 10 cks.
Rotterdam, 7
Tin Ashes—
Marseilles, 1 ck.
Turpentine—
Savannah, 200 brls.
Waste Salt—
Hamburg, 3,559 bgs.
White Lead—
Rotterdam, 20 cks. J. Matthews & Co.
Wood Pulp—
Gothenburg, 17 bls. G. T. Green & Co.
Boston, 70
Montreal, 3,960 A. Rice & Co.
Rotterdam, 160
Zinc Ashes—
Genoa, 3 cks.
Zinc Chloride—
Antwerp, 20 dms.
Zinc Oxide—
Antwerp, 110 brls.
Rotterdam, 28 cks. J. Matthews & Co

MANCHESTER.

Week ending July 30th.

Albumen—
Hamburg, 4 cks.
Ammonia—
Rotterdam 25 cyldrs.
Aniline Colours—
Hamburg, 44 cks. 5 cs.
Barytes—
Antwerp, 200 bgs.
Cement—
Antwerp, 2,810 bgs.
Ghent, 1,020
Chemicals *(otherwise unaescribed)*
Hamburg, 15 cks. 5 cs. 20 dms.
Rotterdam, 4
Colours—
Antwerp, 8 cks. 10 cs.
Hamburg, 11
Rotterdam, 97, 21, 17 brls.
Farina—
Hamburg, 50 bgs.
Rotterdam, 1,020
Stettin, 850 Browne, Geveke, & Co.
" 370
Glucose—
Rotterdam. 4 cks.
Stettin, 150, 1,100 bgs.
Glue—
Hamburg, 300 bgs.
Rotterdam, 20
Stettin, 51
Treport, 9 cks. 38 bls.
Indigo—
Rotterdam, 17 chts.
Limestone—
Antwerp, 3 cs. J. T. Fletcher & Co.
" 10 crts.
Litharge—
Rotterdam. 16 cks.
Oxalic Acid—
Hamburg, 15 cks.
Potash—
Hamburg, 5 cks.
Treport, 19 30 dms.

Potassium Carbonate—
Stettin. 37 cks.
Potassium Muriate—
Hamburg, 19 cks.
Soap—
Rotterdam, 3 cs.
Valencia, 53
Soapstone—
Cette, 1,000 bgs.
Sodium Fluoride—
Rotterdam, 1 ck.
Starch—
Rotterdam, 227 cs.
New York, 700 bgs.
Sulphuric Acid—
Rotterdam, 10 cks.
Tallow—
New York, 150 hds.
Tartar Emetic—
Hamburg. 20 cks.
Tartaric Acid—
Rotterdam, 34 cks.
Ultramarine—
Rotterdam. 4 cks.
Waste Salt—
Hamburg, 100 bgs. and qty.
Wood Pulp—
Gefle, 5,602 bls.
Hamburg, 1,444
New York, 528 rolls
Sundswall, 8,400
Zinc Oxide—
New York, 100 brls.
Rotterdam, 70
Zinc White—
Rotterdam, 5 cks.

HULL.

Week ending July 30th.

Albumen—
——, 20 cs. Wilson, Sons, & Co., Ld.
Barytes—
Bremen, 100 bgs., 82 cks.
Rotterdam, 48 W. & C. L. Ringrose
" 83 Hutchinson & Son
Chemicals *(otherwise unaescribed)*
Antwerp, 81 dms. Wilson, Sons, & Co., Ld.
Danzig, 16 cks.
Gothenburg, 6 kgs. "
Rotterdam, 1 ck. Hutchinson & Son
Colours—
Amsterdam, 3 cks. Hutchinson & Son
Antwerp, 2 Bailey & Le tham, Ld
" 13 pks. Wilson, Sons, & Co., Ld.
Danzig, 13 cks. "
Hamburg, 10 "
Rotterdam, 11 pks. "
" 13 cs., 4 brls., 6 cks. Hutchinson & Son
" 1 W. & C. L. Ringrose
Dyestuffs—
Alizarine
Rotterdam, 11 brls., 1 cs., 72 cks. Hutchinson & Son
Aniline
Rotterdam, 6 cks. Hutchinson
7 cs. & Son
Extracts
Bordeaux, 32 cks.
Gambier
Hamburg, 248 bls.
Indigo
Rotterdam, 1 brl. Hutchinson & Son
Valonia
Smyrna, 100
Dyestuffs *(otherwise undescribed)*
Antwerp, 607 bgs. Wilson, Sons, & Co., Ld.
Farina—
Danzig, 102 bgs. Wilson, Sons, & Co., Ld.
Stettin, 100 "
Glucose—
Hamburg, 103 cks. Wilson, Sons, & Co., Ld.
New York 100 brls.

Glue—
Antwerp, 80 bls. Bailey & Leetham. Ld.
Hamburg, 33 pks. Sommerfeld & Mead
" 100 bgs. Wilson. Sons, & Co., Ld
Lime Acetate—
Stettin, 28 cks. Wilson, Sons, & Co., Ld
Lithopone—
Rotterdam, 6 cks. W. & C. L. Ringrose
Ochre—
Amsterdam, 71 bgs. Hutchinson & Son
Paint—
Hamburg, 4 cks. Wilson, Sons, & Co., Ld.
Phosphates—
Ghent, 160 t.
Pitch—
Copenhagen, 50 brls.
Potash—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Hamburg, 13
Pumice Stone—
Hamburg, 1 ck. Wilson, Sons, & Co., Ld.
Pyrites—
Antwerp, 73 cks. H. F. Pudsey
Soap—
New York, 1 brl. Wilson, Sons, & Co., Ld.
Soap Stock—
New York, 30 brls. Wilson, Sons. & Co., Ld.
Soda—
Amsterdam, 135 bgs. Hutchinson & Son
Antwerp. 90 Wilson, Sons, & Co.. Ld.
Sodium Sulphide—
Amsterdam, 1 dm. Hutchinson & Son
Starch—
Amsterdam, 40 cs. Hutchinson & Son
Antwerp, 80 Bailey & Leetham, Ld.
" 50 Wilson, Sons, & Co.. Ld.
Bremen, 1,676 Veltmann & Co.
Ghent, 412 Wilson, Sons, & Co., Ld.
Stearine—
Antwerp, 25 bgs. Wilson, Sons, &Co., Ld.
New York, 50 tcs. "
Talc—
New York, 2,124 bgs. Wilson, Sons, & Co., Ld
Tannin—
Rotterdam, 5 cks. Hutchinson & Son
Tallow—
Dunkirk, 239 cks. Wilson, Sons, & Co., Ld.
Tar—
Copenhagen, 1 brl.
Uleaborg, 1,000 200 hf.-brls.
Tartar—
Bordeaux, 14 cks. Rawson & Robinson
" 2 cs.
" 2 cks.
Tartaric Acid—
Rotterdam, 18 cks. Hutchinson & Son
Turpentine—
Antwerp, 148 cks.
Ultramarine—
Bremen, 23 cks.
Rotterdam, 2 W. & C. L. Ringrose
" 1 Hutchinson & Son
Waste Salt—
Hamburg, 200 t.
White Lead—
Antwerp, 25 cks. Bailey & Leetham. Ld.
Christiania, 8 Wilson, Sons, & Co., Ld
Ghent, 44 "
Rotterdam, 41 Hutchinson & Son
Wood Pulp—
Antwerp, 256 bxs Wilson, Sons, & Co., Ld.
Christiania, 3,163 bls. "
Gothenburg, 845 "
Hamburg, 20 bxs. "
" 40 bls. Bailey & Leetham, Ld.
Helsingfors, 305 J. Good & Sons
Zinc Oxide—
Antwerp, 75 cks. Bailey & Leetham, Ld.

GLASGOW.

Week ending August 4th.

Acetate of Lime—
Philadelphia, 271 bgs.
Acetic Acid—
Rotterdam, 7 cks.
Alumina Sulphate—
Rotterdam, 100 bgs. J. Rankine & Son
Aniline Salt—
Rotterdam, 10 cks. J. Rankine & Son
Antimony Salts—
Rotterdam 10 cks.
Asbestos—
Genoa, 3 bgs. 24 cs.
Barium Sulphate—
Antwerp, 150 bgs.
Barytes—
Rotterdam. 50 pks.
Bone Meal—
St. Petersb'rg. 2,414 bgs.
Boracic Acid—
Leghorn, 6 brls.
Castor Oil—
Leghorn, 40 cs.
Marseilles, 185 cks.
Chemicals *(otherwise undescribed)*
Rotterdam, 3 cks. 9 cs. J. Rankine & Son
Colours—
Rotterdam, 55 pks.
Hamburg, 20 cks.
Dyestuffs—
Alizarine
Rotterdam, 4 cks. 1 cs. 14 brls. J. Rankine & Son
Aniline
Hamburg, 16 cks. 2 cs.
Rotterdam, 26, 5, 3 bxs. 7 brls. J. Rankine & Son
Annatto
Bordeaux, 2 cks.
Argols
Bordeaux, 52 cks.
Extracts
Genoa, 48 brls.
Indigo
Amsterdam, 2 chts. J. Rankine & Son
Dyestuffs *(otherwise undescribed)*
Philadelphia, 250 sacks
Flourchron—
Rotterdam, 2 cks. J. Rankine & Son
Glue—
Antwerp, 4 cks.
Genoa, 15
Rotterdam, 70 bgs.
Infusorial Earth—
Hamburg, 161 bgs.
Magnesia—
Genoa, 2 brls.
Mineral White—
Genoa, 50 bgs.
Oxalic Acid—
Rotterdam, 6 cks.
Phosphate Rock—
Antwerp, 1,040 bgs.
Plumbago—
Genoa, 80 bgs.
Potash—
Hamburg, 101 cks.
Rotterdam, 64 J. Rankine & Son
Potassium Oxalate—
Rotterdam, 3 cks.
Pyrites—
Huelva, 1,859 t. Tharsis Sulphur & Copper Co.
Salt—
Hamburg, 150 bgs.
Saltpetre—
Hamburg, 42 cks.
Soap—
Hamburg, 1 cs.
Marseilles, 2
Soap Lye—
Marseilles, 21 dms.

Sodium Acetate—
Genoa, 63 brls.
Starch—
Antwerp, 5 bgs. 200 cs.
Rotterdam 15 J. Rankine & Son
Stearine—
Philadelphia, 20 tcs.
Sulphuric Acid—
Hamburg, 1 cs.
Tallow—
Philadelphia, 90 trcs.
Rotterdam, 41 J. Rankine & Son
Tannin—
Hamburg, 1 ck.
Tartar Emetic—
Hamburg, 2 cks.
Tartaric Acid—
Hamburg, 10 cks.
Ultramarine—
Rotterdam, 5 cs. J. Rankine & Son
Varnish—
Antwerp, 2 cks.
Waste Salt—
Hamburg, 3,333 bgs.
White Lead—
Rotterdam, 50 cks.
Christiania, 40
Wood Pulp—
Christiansand, 500 bls.
Christiana, 2,900 45 cs.
Drammen, 1,040 20
Gefle, 4,428
Hamburg, 38
Montreal, 2,460 220 bdls.
Skutskar, 800
Zinc Oxide—
Antwerp, 25 brls.
Zinc White—
Rotterdam, 50 cks. J. Rankine & Son

TYNE.

Week ending July 30th.

Antimony—
Hamburg, 224 cs. Tyne S. S. Co.
Asbestos—
Hamburg, 2 bls. Tyne S. S. Co.
1 cs.
Bleaching Powder—
Antwerp, 25 brls. Tyne S. S. Co.
Colours—
Antwerp, 6 cks. Tyne S. S. Co.
Hamburg, 2 "
Copperas—
Hamburg, 62 cks. Tyne S. S. Co.
Glucose—
New York, 50 brls. Furness, Withy, & Co.
Limestone—
Antwerp, 15 crts. Tyne S. S. Co.
Phosphates—
Treport, 218 t.
oap—
Rotterdam, 14 cs. Tyne S. S. Co.
Starch—
Antwerp, 40 cs Tyne S. S. Co.
New York, 200 bgs. Furness, Withy, & Co.
Rotterdam, 141 cs. Tyne S. S. Co.
Stearine—
Antwerp, 13 bgs Tyne S. S. Co.
White Lead—
Hamburg, 1 cs. Tyne S. S. Co
Wood Pulp—
Christiania, 520 bls.
Rotterdam, 50 Tyne S. S. Co
Zinc Oxide—
Antwerp, 65 brls. Tyne S. S. Co.

GOOLE.

Week ending July 27th.

Alizarine—
Rotterdam, 25 brls.
Anthracene—
Boulogne, 5 cks.
Antimony—
Boulogne, 1 ck.
Caoutchouc—
Boulogne, 3 cks.
Colours—
Hamburg, 40 cks. 3 cs.
Dyestuffs *(otherwise unnescribed)*
Boulogne, 20 cks. 1 cs. 108 pks.
Rotterdam, 306 34 1
Farina—
Delfszyhl, 200 bgs.
Glue—
Boulogne, bgs. 4 kgs.
Logwood—
Hayti, 630 t.
Madder—
Rotterdam, 4 cks.
Phosphate of Lime—
Hamburg, 9 cks.
Potash—
Calais, 72 dms.
Hamburg, 32 cks.
Saltpetre—
Rotterdam, 70 bgs.
Soap—
Rotterdam. 4 cs.
Tartaric Acid—
Rotterdam, 2 cks.
Varnish—
Hamburg, 2 cks.

GRIMSBY.

Week ending July 30th.

Caoutchouc—
Antwerp, 2 cs.
Hamburg, 1
Rotterdam, 2
Colours—
Rotterdam, 3 cks. 25 pks.
Hamburg, 14 10 cs. 37
Starch—
Antwerp, 8 cs.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 3rd.

Acids—
Calcutta, 20 cs. £16
Durban, 20 pks. 16
Madras, 34 30
Alkali—
Madras, 3 t. 7 c. £17
Ammonia—
Durban, 10 cs. £15
Brisbane, 10
Anhydrous Ammonia—
Cologne, 10 cylds. £25
Hiogo, 3 cs. 23
Ammonium Carbonate—
Stettin, 1 t. 2 c. £28
Bremin, 10 brls. 28
Ammonium Chloride—
Constantinople, 2 t. 10 c. £73
Ammonium Sulphate—
Antigua, 11 t. 3 c. £100
Antwerp, 20 200
Bremen, 155 1,485
Colombo, 10 129
Hamburg, 199 1,895
Bisulphite of Lime—
Calcutta, 4 t. 8 c. £64
Bleaching Powder—
Rio de Janeiro, 12 c. £40
Borax—
Rotterdam, 2 t. 10 c. 50cks. £175
Madras, 12 26
Launceton, 10 cs. 69
Carbonic Acid Gas—
Channel Is., 45 tubes £17
Hamburg, 6 cs. 21
B Ayres. 2 18
Caustic Soda—
Auckland, 5 t. 7 c. £75
Durban, 3 7 43
Wellington, 5 5
Cape Town, 12 7
Napier, 5 39
Chemicals *(otherwise undescribed)*
Philadelphia, 2 cks. £20
Madras, 10 52 pks. 96
Napier, 5 21
Antwerp, 1 kgs. 12
Brussels, 8 48
Adelaide, 73 41
Melbourne, 69 93
Sydney, 40 cs. 9 131
St. John, N.B. 6 34
E. London 12 36
Barranquilla, 15 108
Hiogo, 119 bgs. 118
Colombo, 13 413
Rangoon 9 60
Amsterdam, 6 kgs. 33
Demerara, 75 20
Pt. Elizabeth, 33 46
St. Petersburg, 3 cs. 137
Wellington, 9 dms. 12
Dusseldorf, 14 cks. 82
Citric Acid—
Colombo, 2 c. £14
Rotterdam, 2 kgs. 14
Auckland, 10 37
Yokohama, 1 t. 5 140
New York, 2 12
Barbadoes 1 7
Montreal, 1 130
Genoa, 3 378
Galatz, 1 7
Amsterdam, 5 32
St. Petersburg, 5 31
Karachi, 1 cs. 7
Antwerp, 1 109
Coal Products—
Aniline
Madras, 4 cks. £28
Valencia, 1 cs. 8
Sydney, 1 12
Anthracene
Cologne, 285 cks. £661
Benzine
Cape Town, 3 dms. £11
Benzol
Treport, 30 cks. £80
Carbolic Acid
Rio de Janeiro, 12 cks. £30
Auckland, 2 cs. 5
Alexandria, 2 20
Hong Kong, 20 dms. 15
Durban, 25 8
Cologne, 72 cks. 319
Dusseldorf 80 600
Santos, 1 7
Creosote
New York, 675 cks. £616
Bayonne, 80,256 gls. 491
Dieppe, 23,500 123
Boston, 3 cs. 16
Naphthaline
Hamburg, 6 cks. £53
Dusseldorf, 500 bgs. 244
Pitch
Hochfeld, 347 t. £474
Alexandria, 350 brls. 102
Antwerp, 135 150
Cologne, 54 117
Durban, 10 cs. 5
Montreal, 280 cks. 55
Prussian Blue
Ghent, 4 kgs. £10
Pyridine
Stettin, 12 cks. £130
Tar
Shanghai, 20 brls. £20
Hamburg, 200 86
Cologne, 100 cks. 60
Copper Sulphate—
Paris, 5 t. £75
Amsterdam, 5 1 c. 78
Odessa, 7 107
Treport, 10 165
Cream of Tartar—
Wellington, 14 c. £52
Cape Town, 4 15
Disinfectants—
Canton, 6 cs. £20
Cape Town, 320 pks. 64
Madras, 100 cks. 151 98
Aden, 22 15
Antigua, 5 35
Calcutta, 288 69
Colombo, 54 10
Auckland, 16 41
Singapore, 20 dms. 30 48
Hamburg, 50 cks. 200
Sydney, 8 13
Durban, 120 dms. 30
Manure—
Durban, 17 t. £56
Brisbane, 10 19 c. 388
Auckland, 55 185
Sables d'Olonne, 75 398
Nitric Acid—
Madras, 20 cs. £15
Potassium Bichromate—
Rotterdam, 2 t. 4 c. £75
Dunkirk, 2 6 73
Potassium Cyanide—
Auckland, 6 t. £616
Melbourne, 1 50 cs. 693
Sydney, 40 443
New York, 300 1 455
Pt. Elizabeth, 15 10 c. 1,603
Townsville, 11 1,232
Mossel Bay, 5 pks. 35
Delagoa Bay, 1 107
Fremantle, 40 cs 467
Potassium Prussiate—
Montreal, 14 cks. £311
Rotterdam, 9 193
Saltpetre—
Brisbane, 10 c. £11
Rio de Janeiro, 1 t. 4 25
Durban, 1 10 33
Sheep Dip—
Jamaica, 8 c. £8
Durban, 100 dms. 20
Calcutta, 190 12
Pt. Elizabeth, 35 20
B. Ayres, 621 4 cs. 213
Soda—
Auckland, 1 t. £16
Delagoa Bay, 1 15 c. 22
Pt. Chalmers, 6 9
Soda Crystals—
Fremantle, 4 t. 20. £15
Durban, 3 5 10
Soda Salts—
New York, 5 kgs. 20 brls. £120
Sodium Bicarbonate—
Melbourne, 1 t. 5 c. £60
Sydney, 1 6 60
Auckland, 4 29
Sodium Prussiate—
Hamburg, 5 t. £321
Tartaric Acid—
Calcutta, 2 cks. £10
Auckland, 5 kgs. 29

LIVERPOOL.

Week ending August 3rd.

Acetic Acid—
Bombay, 16 c £13
Barcelona, 4 3 q. 83
Alkali—
Shanghai, 5 t. 1 c. 2 q £20
Marseilles, 3 9 3 14
Galatz, 23 3 105
Constantinople, 3 3 13
Barcelona, 7 13 3 30
Valencia, 37 10 170
Malta, 4 3 10
Alum—
Samarang. 6 t. £30
Montreal, 3 1 c. 1 q. 17
Melbourne. 2 10
Volo, 1 7 3 7
Bourgas, 2 11 3 12
Pernambuco, 5 21
Piræus, 5 10 28
Ammonia—
Piræus. 7 c. £10
Ammonium Acetate—
Piræus, 12 c. £15
Ammonium Carbonate—
Hamburg, 11 c. £18
Ancona, 4 6
Stettin, 11 14
Stockholm, 1 t. 2 1 q. 23
Marseilles, 12 24
Cara, 2 2 6
Ammonium Chloride—
Melbourne, 2 t. £31
Alexandria, 2 65
Barcelona, 1 30

Ancona, 10 c. 16
Piræus, 3 5
Odessa, 2 18 49

Ammonium Sulphate—
Nantes, 10 t. 5 c. 3 q. £102
Venice, 10 10 100
Barbadoes, 10 96
New York, 25 240
Palermo 50 480
Las Palmas, 5 48
Teneriffe, 20 192
Baltimore 50 10 472
Samarang, 131 3 1 1,185
Sourabaya, 283 8 2,745
Penang, 28 8 3 248
Honfleur, 100 900
Genoa, 10 3 2 90
Hamburg, 10 100
Messina, 1 9

Antimony Sulphide—
New York, 14 c. 2 q. £30

Barium Binoxide—
Osaka, 1 t. 10 c. £56

Basic Slag—
Nantes, 138 t. £206

Bleaching Powder—
Algoa Bay, 20 cs.
Baltimore, 30 bxs.
Bilbao, 35 cks.
Bombay, 6
Boston, 478
B. Ayres, 11
Christiana, 10
Genoa, 94
Ghent, 77
Leghorn 32
Lisbon, 62
Montreal, 32
Nantes, 29
New York, 42
Philadelphia, 184
San Sebastian, 45
Seville, 49

Boracic Acid—
Rotterdam, 16 c. £22

Borax—
Montreal, 18 t. 11 c. 2 q. £263
Rotterdam, 2 16 40
Antwerp, 2 9 1 37
Hamburg, 25 7 385
St John's, N.B., 1 7 1 20
Vera Cruz, 20 kgs. 26

Calcium Chloride—
Boston, 32 t. 3 c. £61
Leghorn, 2 5
Melbourne, 5 13
New York 12 19 29
Genoa, 4 16 12

Carbolic Acid—
Hamburg, 5 t. 12 c. £13
New York, 2 10 163
Madeira, 1 9
Penang 1 8 16
Accra, 6 dms. 5

Caustic Potash—
Baltimore, 1 t. 16 c. £30
Sydney, 2 51
Melbourne, 10 20

Caustic Soda—
Bahia, 15 dms.
Baltimore, 36 pks.
Barcelona, 38 54 cks 60
Bombay, 15
B. Ayres, 50
Cartagena, 60
Ceara 70
Constantinople, 10
Delagoa Bay, 20
Galatz, 100
Genoa, 40
Las Palmas, 14
Leghorn, 12
Limon, 30
Malaga, 10
Malta, 7
Messina, 45
Naples, 50
New York, 285
Oporto, 15
Para, 10
Philadelphia. 100
Rio. G. do. Sul 75
Rettino, 5
Rotterdam, 11
St. John's, N.B., 10
San Sebastian, 15 80
Savanilla 50
Seville, 30
Sydney. 20
Tampica, 350
Valparaiso, 60

Chemicals *(otherwise undescribed)*
Sydney, 8 t. £118
Christiania, 10 c. 3 q. 8
Hamburg, 1 1 2 brls. 50
Natal, 1 3
Alexandria, 10 7
Alexandretta, 8 33
Stettin, 2 cks. 14 31
B. Ayres, 12 bxs 50
Bombay, 25 118
Barcelona, 1 t. 28
Madras, 9 19 c. 898
Rotterdam, 10 15
Yokohama, 1 24
Satander, 2 53
Tampico, 15 kgs. 25
Philadelphia, 13 t. 14 375

China Clay—
Barcelona, 12 cks.
Belize, 80 cs.
Bombay, 775
Montreal, 200
Rio de Janeiro, 32 40 brls.
Sydney, 24

Chromium Trioxide—
Antwerp, 6 c. £19

Citric Acid—
Madeira, 2 q. £5

Coal Products—
Aniline Oil
Boston, 5 dms.
Aniline Salts
Boston, 16 cs.
Creosote Oil
Bordeaux, 100 cks.
Dyes
Genoa, 2 kgs. 7 tins
Pitch
Antwerp, 105 t.
Bathurst, 1 kg. 3 brls.
Tar
Ibrail, 20 brls.
Kustendjie, 20

Copperas—
Alexandria, 4 t. 17 c. 1 q. £15
Tripoli, 4 8 12
Rio de Janeiro, 19 2 250

Copper Sulphate—
Bordeaux, 24 t. 7 c. 2 q. £393
M. Video, 8 7 130
Ghent, 4 19 80
Genoa, 16 14 1 267
Galatz, 2 32
Bombay, 3 2
Catania, 18 3 15
Palermo, 3 6 2 61

Disinfectants—
Rangoon, 11 cks. 1 cs. 60 gls. 6 dms. £24
Calcutta, 3 t. 6 c. 40 dms. 52
Para 3 2 q. 5
Piræus. 2 5

Dried Blood—
Mauritius, 58 t. 14 c. 3 q. £420
Dunkirk, 39 14 310

Dyestuffs—
Aniline Colours
Boston, 8 kgs.
Extracts
Boston, 10 cks.

Glycerine—
Montreal, 1 t £193
Hamburg, 10 c. 30
Vancouver City, 49 12 2 q. 1,851
New York, 5 240

Iodine—
Hamburg, 22 brls. £1,870

Magnesium Chloride—
Genoa, 7 t. 19 c. 3 q. £21

Magnesium Sulphate—
Cape Coast Cstle, 2 cs.
Kotonou, 1

Manure—
Antwerp, 10 t. 11 c. £50
Gd. Canary, 27 259
Honfleur, 458 12 1 q. 1,784
La Pallice, 221 7 3 581
Madeira, 10 2 25
Montserrat, 5 21
Penang, 3 16 33
St. Nazaire, 69 7 265
Sourabaya, 50 600
Stockholm, 15 19 3 72

Paint—
Alexandria, 739 kgs.
Belize, 375 10 cks.
Bocas del Toro, 3
E. London, 14 pks.
Gibraltar, 6 dms.
La Libertad, 5 cks.
M. Video, 21
Mossel Bay. 2 cs. 2
St. John's, 4
Tongku, 1

Painter's Colours—
Algoa Bay, 5 c.
Bathurst, 24 kgs. 1 ck.
Brass, 31
Danzig, 200 bgs.
Iquitos, 20 brls.
Libau, 90
Lisbon, 40
New York, 3 pks.
Pernambuco, 25
Rio de Janeiro, 24 dms.
St. Thomas, 125 kgs.
Tocopilla, 20

Paraffin Wax—
Genoa, 6 cs.

Potash—
Santos, 2 t. 17 c. £13

Potassium Bichromate—
Constantinople, 1 t. £35

Potassium Carbonate—
Baltimore, 5 c. £5

Potassium Chlorate—
Boston, 7 t. 10 c. £225
Colon, 1 5 45
Copenhagen, 2 10 82
Gutujewski, 6 16 180
Hamburg, 18 27
Hiogo, 10 320
Naples, 2 61
New York 100 300
Odessa. 1 30
Philadelphia, 8 15 253
Rio de Janeiro, 5 150
Rotterdam, 9 15
Shanghai, 4 10 150
Sydney, 5 160
Varna, 3 q. 6

Potassium Cyanide—
Taltal, 2 t. £243

Salt—
Adelaide, 19 c.
Baltimore, 50 t.
Barbadoes, 79
Bata, 500 bgs.
Batanga, 750
Brisbane, 25 t.
Brussels, 7 4
B. Ayres, 200 cs. 100 brls. 131 14 c.
Cabenda, 8 11
Cameroons, 36 9
Cape Town, 72 6
E. London, 49
Komillon, 197 16
Landana, 56 2
Lisbon, 1
Matadi, 51 14
Melbourne, 44
Montreal, 387 10
Mossel Bay, 25
Newcastle, 142
N. Orleans, 150
Pt. Elizabeth, 200 sks.
Vancouver, 2,238 bgs.

Salt Cake—
Bombay, 2 t. 1 q. £5
Lisbon, 45 3 c. 79

Saltpetre—
Boca, 11 c. 2 q. £12
New Plymouth, 1 t. 5 7
Syra, 2 13 49
Valparaiso, 15 297

Sheep Dip—
B. Ayres, 187 t. 3 c. £1,040
Calcutta, 100 dms. 25
E. London, 50 6

Soap—
Algoa Bay, 1,681 pks. 125 cs.
Alexandria, 100 bxs. 4
Athens,
Barbadoes, 495
Bathurst, 27
Belize, 30
Bloemfontein, 10
Bombay, 710 48
Brussels, 1,802
B. Ayres, 15
Cairo, 40
Calcutta, 7 pks. 250 bdls. 6 crts.
Cape Town, 50 bxs.
Colon, 525
Dominica, 20
Durban, 2,855
E. London, 200
Galata, 20 cs.
Geneva, 240
Gibraltar, 60
Greytown, 250
Iquitos, 360
Kingston, 1,157
Lagos, 140
Ladysmith, 6
Madras, 10
Malta, 20
Manaos, 650
Maracaibo, 1
Monrovia, 89
Mossel Bay, 100
Natal, 700
New York, 1 ck.
Old Calabar, 1,200
Opobo, 1,120
Para, 1,050
Penang, 25
Piræus, 20
Pt. Elizabeth, 550 80
Pt. Natal, 200 251
Prevesa, 3
Rangoon, 2
Rawal Pindi, 1
St. Gall, 240
St. John's, N'd., 175
St. John's, 535
Santa Cruz de Teneriffe, 200
Sierra Leone, 140
Teneriffe, 222
Trinidad, 20 kgs. 2
Zurich, 260

Soap Lye—
New York, 6 dms.

Soda Ash—
Boston, 39 tcs. 1,410 bgs.
Brisbane, 42 cks.
B. Ayres, 150 brls. 149
Callao, 20
Copenhagen, 170 20
Fremantle, 40
Hamburg, 13
Hobson Bay, 8
Lisbon, 16
Melbourne, 163
New York, 67
Piræus, 3 c. 66
Rio de Janeiro, 225 50
Riga. 16
San Sebastian, 100 bgs. 11
Syra, 30

Soda Crystals—
Bombay, 10 kgs.
Boston, 67 brls.
Catania, 15 cks.
Fremantle, 27
Malta, 40
M. Video, 50
Montreal, 25 25 bgs.
Oporto, 6
Singapore, 7

Sodium Acetate—
Vera Cruz, 4 cks.

Sodium Bicarbonate—
Brisbane, 50 kgs.
B. Ayres, 50 bgs. 91 cks.
Catania, 25 kgs.
Danzig, 23 pks.
Fremantle, 10 bgs. 75 kgs.
Invercargill, 60
Kingston, 50
Madras, 60 cks.
Melbourne, 414
M. Video, 50 cs.
Montreal, 60
Nantes, 22 brls.
Napanee, 25
Quebec, 125 pks.
San Luis Potosi, 15
Santander, 2
Santos, 20

Sodium Chlorate—
Hamburg, 7 cks.

Sodium Silicate—
Bombay, 5 brls.
Nantes, 15 dms.

Sulphur—
Boston, 300 t. 9 c. £1,292
Drammen, 100 430
Fairwater, 60 255
Maceio, 14 3 q. 5
Montreal, 105 2 451
Vera Cruz, 4 18 1 30

Superphosphates—
Gd. Canary, 1 t. 18 c. £8
La Pallice, 230 462
Teneriffe, 10 35

Tartaric Acid—
Pisco, 4 c. 2 q. £21

Varnish—
E. London, 16 dms.
Genoa, 2 cs.
Leghorn, 5
St. John's, 2
Seville, 1

White Lead—
Bahia, 30 kgs.
Pernambuco, 50 cks.
Zinc Chloride—
Bombay, 1 t. 15 c. £25
Zinc Powder—
Calcutta, 1 t. 8 c. £30

MANCHESTER.

Week ending August 3rd.

Alum—
Djerba, 6 brls.
Aniline Colours—
France, 1 kg.
Holland, 7 cks.
Germany, 2 cs.
Aniline Oil—
Belgium, 7 dms.
Holland, 10 tins 5
Germany, 5
Aniline Salt—
Holland, 1 tin
Germany, 12 brls. 15 pns.
Bones—
Treport, 267 bgs.
Caustic Soda—
Rio de Janeiro, 8 dms.
Chemicals (*otherwise undescribed*)
Alexandretta, 100 brls.
Hamburg, 2 kgs. 4 cks.
Colours—
France, 1 ck.
Copper Sulphate—
Lille, 21 cks.
Rio de Janeiro, 1
Dyestuffs (*otherwise undes.*)—
Bushire, 2 cs.
Sultanabad, 17
Extracts—
France, 8 cks.
Glue—
Holland, 18 cks.
Linseed Oil—
Beyrout, 23 brls.
Naphthylamine—
Germany, 28 cks.
Naphthol—
Belgium, 1 ck.
Oxalic Acid—
Bushire, 4 cs.
Paint—
Beyrout, 2 cks. 20 dms.
Jaffa, 22 2 cs.
Mersyne, 4 16 kgs.
Painters' Colours—
Beyrout, 15 brls.
Jaffa, 9 cks. 4
Mersyne, 1
Paraffin Wax—
France, 5 bls
Pitch—
Belgium, 4,017 c.
Potassium Bichromate—
Alexandretta, 40 cks.
Bushire, 8 cs.
Salt—
Gothenburg, 100 t.
Size—
France, 3 cks.
Soap—
Alexandria, 2 cs.
Bussorah, 100 bxs.
France, 1
Germany, 1 ck. 2 pns.
Sulphuric Acid—
Ispahan, 8 cs.
Rio de Janeiro, 24
Toluol—
Germany, 20 dms.
Turpentine—
Jaffa, 2 brls.
Varnish—
Beyrout, 4 cs.
Jaffa, 1

HULL.

Week ending July 30th.

Alkali—
Abo, 8 c'cs.
Helsingfors, 2
Libau, 20
Ammonium Sulphate—
Dunkirk, 23 bgs.
Rouen, 236
Bleaching Powder—
Riga, 30 cks.
Caustic Soda—
Riga, 6 cks. 147 dms.
Chemicals (*otherwise unaescribed*)
Amsterdam, 53 cks.
Christiania, 721 slbs.
Dunkirk, 1 cs.
Gothenburg, 16 50 3 tcs.
Helsingfors, 110
Hamburg, 6
Riga, 44 1 100 pks.
Rotterdam, 400 56
St. Petersburg, 60
Stettin, 14
Stockholm, 1
Cottonseed Oil—
Amsterdam, 683 c.
Antwerp, 590
Bremen, 133
Christiansand, 20
Copenhagen, 200
Drontheim, 42
Dunkirk, 119
Gothenburg, 100
Hamburg, 626
Harlingen, 21
Rouen, 341
Rotterdam, 800
Stockholm, 155
Creosote Salts—
Antwerp, 267 bgs.
Dyestuffs (*otherwise undescribed*)
Norrkoping, 1 ck.
Riga, 3
Linseed Oil—
Antwerp, 20 c.
Bergen, 18
Copenhagen, 100
Christiania, 77
Christiansand, 20
Drontheim, 176
Ghent, 6
Manure—
Dunkirk, 2,848 bgs.
Painters' Colours—
Amsterdam, 1 ck. 1 cs.
Antwerp, 1 pk. 105 dms
Boston, 20
Christiania, 2 1
Copenhagen, 2 6
Dunkirk, 1
Ghent, 1 117
Gothenburg, 100 90
Helsingfors, 100 300
Hamburg, 22
Konigsberg, 40
New York, 195
Rouen, 12
Rotterdam, 11
St. Petersburg, 37
Stettin, 39
Stockholm, 2
Pitch—
Antwerp, 50 t.
Helsingfors, 110 cks.
Slag Meal—
Riga, 374 t.
Soap—
Amsterdam, 25 cs.
Christiania, 115 pks.
Drontheim, 1
Helsingfors, 1
Hamburg, 2
Tallow—
Konigsberg, 26 cks.
Tar—
Christiania, 10 cks.
Copenhagen, 5
Hamburg, 12 brls.
Rotterdam, 9
St. Petersburg, 100
Varnish—
Amsterdam, 1 cs.
Antwerp, 5 brls. 1 cs.
Bremen, 1
Boston, 1
Christiania, 1
Ghent, 2
Gothenburg, 3 dms.
Helsingfors, 8
Hamburg, 1
Stockholm, 1
Waste Salt—
Amsterdam, 20 brls.

GLASGOW.

Week ending August 4th.

Ammonium Carbonate—
Stockholm, £64
Ammonium Chloride—
Stockholm, £20
Ammonium Sulphate—
Amsterdam, 92 t. 12 c.
Colombo, 6 10
Danzig, 50 13
Rotterdam, 10 13
Bisulphite of Lime—
Ootacamund, 1 t. 10 c.
Boracic Acid—
Hiogo, £77
Yokohama, 90
Coal Products—
Benzol
Hamburg, 8 t. 5 c.
Creosote Oil
Christiania, 10 t. 10 c.
Danzig, 10 12
Pitch
Canada, £92
Tar
Canada, £138
Christiania, 13 t. 5 c.
Danzig, 150 13
Montreal, 24
U.S.A., 43
Tar Oil
Hamburg, 10 t.
Extracts—
Barcelona, £54
Stockholm, 5 0
Iodine—
Rotterdam, £250
Lead Acetate—
Montreal, £50
Paint—
Kobe, £52
Painters' Colours—
Bangkok, £44
Calcutta, 148
Colombo, 86
Pt. Said, £42 10s.
Singapore, £224
Paraffin Wax—
Barcelona, £39
Christiania, 2½ c.
Danzig, 10 t. 3
Stockholm, 45
Potassium Bichromate—
Antwerp, £124
Barcelona, 499
Hiogo, 302
Montreal, 146
Rotterdam, 43
Stockholm, 24
Potassium Cyanide—
Madras, £468
Singapore, 107
Soap—
Rotterdam, 2 c.
Singapore, 2 t.
Sodium Bichromate—
Antwerp, 1 t. 1 ½ c.
Barcelona, 5 1 ½
Starch—
Barcelona, £67
Tannin—
Barcelona, £350
Ultramarine—
U.S.A., £37

TYNE.

Week ending July 30th.

Alkali—
Riga, 55 t. 10 c.
Rotterdam, 2 4
St. Petersburg, 10 10
Ammonia—
Pomaron, 8 c.
Ammonium Sulphate—
Hamburg, 50 t. 13 c.
Antimony—
Antwerp, 1 t.
Rotterdam, 1
Barium Binoxide—
Rouen, 22 t. 2 c.
Barium Carbonate—
Hamburg, 49 t. 10 c.
Bleaching Powder—
Amsterdam, 40 t. 6 c.
Bergen, 13 11
Copenhagen, 2 12
Hamburg, 5 4
Konigsberg, 6 10
Riga, 35
Rotterdam, 17 18
St. Petersburg, 81 14
Bone Grease—
Genoa, 12 t. 13 c.
Bones—
Hamburg, 9 t. 15 c.
Caustic Soda—
Hamburg, 124 t. 4 c.
Konigsberg, 12
Riga, 139 2
Rotterdam, 34 6
St. Petersburg, 10 10
Flour Spar—
New York, 20 t.
Hydrochloric Acid—
Pomaron, 7 c.
Litharge—
Copenhagen, 11 c.
Rouen, 1 t. 14
Magnesia—
Hamburg, 1 c.
St. Petersburg, 2
Magnesium Carbonate—
Cronstadt, 17 c.
Manure—
Valencia, 32 t. 16 c.
Naphthaline—
Riga, 35 t. 8 c.
Nitric Acid—
Pomaron, 18 c.
Paint—
Antwerp, 2 c.
Phosphorus—
Valencia, 1 t. 16 c.
Soda—
Amsterdam, 10 t. 4 c
Rotterdam, 25 7
Soda Ash—
Konigsberg, 125 t. 16 c.
New York, 17 2
Riga, 10 2
Sodium Hyposulphite—
Hamburg, 10 t. 4 c.
Riga, 10 2
Sodium Sulphate—
Cronstadt, 3 t.
St. Petersburg, 20 3 c.
Superphosphates—
Frederikshavn, 650 t. 3 c.
Riga, 579 7
White Lead—
Copenhagen, 1 t.
Riga, 7 7 c.
Zinc Ashes—
Rotterdam, 13 c.

GOOLE.

Week ending July 27th.

Coal Products (*otherwise undes.*)—
Amsterdam, 45 cks.
Boulogne, 55
Ghent, 1
Rotterdam, 53
Colours—
Boulogne, 6 cks.
Ghent, 2
Hamburg, 6 cs.
Rotterdam, 3
Creosote—
Kuysna, 2,000 cks.
Dyestuffs (*otherwise undescribed*
Ghent, 1 ck.
Manure—
Drammen, 6,500 bgs.
Dunkirk, 637
Ghent, 250

GRIMSBY.

Week ending July 30th.

Chemicals (*otherwise unaescribed*)
Dieppe, 3 cs. 1 pk.
Coal Products (*otherwise undes.*)—
Dieppe, 81 cks. 1 cs.
Hamburg, 10
Rotterdam, 25
Colours—
Hamburg, 8 cks.
Rotterdam, 8 2 pks.

PRICES CURRENT. WEDNESDAY, August 10th, 1898

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 %, and 40 % .. .. per cwt.	6/-	&	8/6
,, Glacial .. .. ,,		37	6
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	14		6
Alum (loose lump) .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	4	0	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B .. .. ,,	0	0	2½
,, =24° B .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	9	15	0
,, ,, (grey) Hull .. .. ,,	9	12	6
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	5
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9½
,, 50/90 ,, ... ,,	0	0	9½
Carbolic Acid (crude 60°) .. .. per gallon	0	1	11
,, (crystallised 40°) .. .. .. per lb.	0	0	7
,, (liquid 95/97% .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. ,,	0	19	6
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	3
Copper .. .. per ton	51	3	9
,, Sulphate .. .. ,,	16	10	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	17	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, Nitrate	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	10	0	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	5	0
,, Borate .. .. per cwt.	2	5	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P .. .. ,,	0	4	0
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	5	0
Stearine .. .. per ton	24	10	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red .. .. ,,	0	2	8
Potassium Bichromate .. .. nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	5	0
,, Chlorate .. .. per lb.	0	0	3⅛
,, Cyanide, 98% .. .. ,,	0	1	2
,, Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
,, ,, (Caustic Potash) 75/80 % .. ,,	19	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 5/16
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,, (f.o.r. w'ks.)	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton (1 ton lots)	8	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,, (1 ton lots)	7	5	0
,, ,, (70 % Caustic Soda) ,, ,, ,, (1 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (1 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (1 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	4½
,, Nitrite, 98 % .. .. per ton	25	10	0
,, Phosphate .. .. ,,	9	5	0
,, Prussiate .. .. per lb.	0	0	5⅛
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	4	17	6
Strontium Hydrate, 100% .. .. ,,	15	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	21	0	0
Tin Crystals .. .. per lb.	0	0	5¾
,, English Ingots .. .. per ton	75	10	0
Zinc (Spelter) .. .. ,,	20	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

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PHARMACISTS OR ANALYSTS?

THE fact of the analytical profession having been more securely established—as a profession—during the last decade, by raising the standards of qualification, seems to act on the brethren of the pestle and the pill machine like a red rag on a bull.

In consequence, we find some interesting and half-amusing correspondence in the pages of a pharmaceutical contemporary, in which great lamentation is made over the fact that passing the "Major" examination only carries with it "the empty title of pharmaceutical chemist," instead of the "more substantial qualification of analytical chemist."

The general tone of the correspondence conveys the impression that since the passing of the Pharmacy Act Amendments Act, the expenditure of time and trouble which is necessary in order to earn the title of "pharmaceutical chemist" is not worth the candle.

This seems peculiar, because chemists are jealous enough of their "rights," and woe be to the unqualified person who endeavours to trade as a chemist. If the title be so empty, why guard so closely the vacuous realms of pharmacy?

Looking at the matter comprehensively, we really do not see where any hardship comes in. There is nothing to prevent anyone setting up as an analytical chemist. Any pharmacist may do that to-morrow. Of course he will have to depend for success upon having educated himself to be a skilful and trustworthy analyst; and his reputation will depend upon his merits, unaided by any factitious diploma purveyed for his special benefit by the Pharmaceutical Society. If he wants to pose as a fully qualified analyst, he must attain the standard expected by the public by registering himself as a Fellow of the Institute of Chemistry.

On the other hand, what is the position of the analyst who has spent five or six years in qualifying? He secures a post as Public Analyst in a country district at a not too remunerative salary, and finds that, thanks to his earlier study of drugs, and a smattering of general pharmacy, he could comfortably add to his meagre income by acting as a dispenser. But can he?—certainly not. Merit or no merit, he must not invade the hallowed regions of pharmacy. The Minor and the Major *must* be passed, even if to do so only means a "walk over" for him. And yet pharmacists seem to think it a hardship because there is no half-way house between personal qualification and the full-blown glory of the certified F.I.C.! We fail to see it, just as much as pharmacists fail to see logic and equity in the contention—if pharmaceutical analysts why not analytical pharmacists? The answer is all in favour of the chemist. The analyst may not practice pharmacy unless qualified, but the chemist may bid for his share of analytical work even if his total stock-in-trade be a glass door at the back of the shop bearing the legend "Analytical Laboratory."

The very definition of the work which one of these correspondents suggests should be tacked on to the Major examination, in order to enable pharmacists to pose as analytical chemists, is a most cogent argument against any diploma, save the hall-mark of the F.I.C. being countenanced. Adding on to the Major "such things as analyses of milk, water, urine, coal, coke, etc.," will not make an analyst of the aspirant to pharmaceutical honours. If he will study the syllabus of the Institute of Chemistry Examinations he will perhaps grasp this. At the same time, the fact that he feels the qualifications are beyond him affords no justification for making the Major a back-door entrance to the title of analytical chemist. Surely it is enough that he is not debarred from undertaking analytical work without official qualification. If so be that the newly-fledged "Major" is not contented with pharmacy, he can practice as an analyst, when if he has any merit he will reap his reward, and if he has not he will have learnt a lesson that will do him more good than money. There is no need for the Pharmaceutical Society to create a diploma behind which he may hide his incapacity.

Truth to tell, the whole affair, when you get to the root of it, is only one more effort to secure to the pharmacist another "profitable extra," which many flatter themselves would be extra profitable. But would it?

We are sorry to think that professional analysts should be compelled to play the part of Toreador to pharmacists, but are they sure his bandera is really red? May not the green glasses of jealousy, and their own colour-blindness, account for its appearing so rosy? On the whole, we should advise pharmacists to try another extra. Analytical work, they will find, is not all fees.

IMPORTS AND EXPORTS FOR JULY.

THE Board of Trade returns for the past month are not very satisfactory. The *imports* do not call for special comment. In the *exports* chemical manures, copper, and salt are the only increases.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE

Articles.	Quantities. 1897.	1898.
Margarine ..... Cwt.	67,610	62,107
Copper Ore and Regulus..... Tons	19,878	18,129
Pyrites..... ,,	51,829	64,677
Tin ..... Cwt.	26,406	28,829
Alkali ..... ,,	18,658	23,268
Brimstone ..... ,,	35,880	23,340
Dyes, Coal Tar ..... £.	52,144	65,221
Tar ..... Barrels	13,867	12,514
Saltpetre ..... Cwt.	25,950	19,755
Petroleum ..... Gall.	21,096,814	12,538,203
Turpentine ..... Cwt.	101,402	42,463
Guano ..... Tons.	421	1,295
Nitrate of Soda ..... ,,	3,249	8,842
Paraffin Wax..... Cwt.	47,105	58,803
Rosin ..... ,,	140,504	194,623
Tallow and Stearine..... ,,	264,983	220,524
Oil Seed Cake ..... Tons.	29,405	28,151
Wood Pulp..... ,,	28,310	36,430
Borax ..... Cwt.	—	4,645

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1897.	1898.
Alkali ..... Cwt.	371,991	282,400
Cement ..... Tons.	38,039	30,053
Coal and Coke ..... ,,	3,706,918	2,953,336
Copper, all kinds ..... Cwt.	76,561	85,325
Iron and Steel ..... Tons.	331,553	281,194
Chemical Manures ..... ,,	41,517	48,758
Oils, seed ..... ,,	3,688	3,064
Salt ..... ,,	61,100	75,125

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for June. The total shipments were 93,109,931 gallons, compared with 96,569,600 gallons in 1897. The total for the 12 months ending June, 30th, 1898, was 1,022,210,379 gallons, against 936,924,021 gallons in the same period of 1897. The details of the shipments are as follows:—

	Gallons.
CRUDE PETROLEUM.	
Total, June, 1898	11,118,975
,, ,, 1897	13,279,741
NAPHTHAS.	
Total, June, 1898	1,602,145
,, ,, 1897	1,725,877
ILLUMINATING.	
Total, June, 1898	72,291,029
,, ,, 1897	75,362,536
LUBRICATING AND PARAFFIN.	
Total, June, 1898	5,881,316
,, ,, 1897	3,709,853
RESIDUUM.	
Total, June, 1898	2,216,466
,, ,, 1897	2,491,566

THE FRENCH COMMERCIAL INTELLIGENCE BUREAU.

Owing to the present interest of this subject, due to the propositions made by our Departmental Committee and referred to in the *Journal* last week, we are pleased to put on record the aims and ideas of the French Government on the matter.

The object of the bureau is to supply French merchants and manufacturers with commercial information of every kind that can be of service in the development of foreign trade and the increase of openings for trade in foreign countries, French colonies, &c. Persons interested can therefore address themselves either verbally or by letter to the office in order to obtain information on the following points:—

1. On the raw materials or products which France can import for manufacturing purposes, consumption or transit trade.

2. On French and foreign customs tariff, port dues, and other taxes affecting trade or navigation.

3. On products capable of finding an outlet on foreign markets, French colonies, &c.; on the conditions of payment and packing; on the position of markets, and, as far as possible, on the position of firms established in foreign countries, French colonies, &c.

4. On undertakings to be established in foreign countries; on public works and tenders in foreign countries (communication of plans, &c.); on matters relating to questions of transport—*i.e.*, information as to railway tariffs in France and other countries, and as to sea and inland water navigation, as far as both passengers and goods are concerned, with indications as to the best routes to take.

The circular is continued by the Minister as follows:—

I shall be obliged if you will be good enough to give this circular all possible publicity, especially by the help of the local press.

My department is confident that the Chambers of Commerce and other commercial associations will render every assistance in the development of the new bureau in the direction looked for by the authorities and the public, for the profit of national industries, and the expansion of French trade in our colonial possessions and on foreign markets.

The Minister further points out that Chambers of Commerce are particularly adapted to be the correspondents of the National Office of Foreign Trade, and that the services rendered by them will be reciprocated by the National Office transmitting them all documents and information they may consider useful.

By the terms of the law of the 4th March, 1898, the funds of the National Office of Foreign Trade consist of a Government grant, and an important contribution from the Paris Chamber of Commerce. The law, besides, empowers it as a public establishment to accept grants, gifts, and legacies of all kinds from either public associations or private individuals. . . .

Some of the Chambers have already expressed the wish to afford financial assistance to the National Office on condition that they should be represented on the Administrative Council. Demands of this nature will be submitted to the Council of the National Office at the meeting to be held in October next.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Treating Lead Containing Precious Metals. W. Feit. 16,735. Aug. 7.
Improved Testube Stand. Brewster, Smith, and Co. 16,769. Aug. 3.
Electro-deposition of Metals. W. D. Gooch. 16,807. Aug. 3.
Improved Bunsen Burners. D. Reid. 16,858. Aug. 4.
Extracting Antimony, etc., from Ores. E. L. Rhead and F. A. Bargin. 16,865. Aug. 4.
Manufacture of Oxalic Acid. C. Wülfing. 16,939. Aug. 5.
Explosives. O. Imray. 16,953. Aug. 5.
Sludge Treating Apparatus. C. J. Lomax 16,970. Aug. 6.
Conductors for Electrolytic Purposes. General Electrolytic Patent Co., Ltd., Luke Hargreaves and W. Stubbs. 16,973. Aug. 6.
Apparatus for the Manufacture of Ammonium Sulphate from Ammoniacal Liquors. I. Carr. 16,978. Aug 6.
Waterproofing Wood Pulp, Straw, etc. L. Lityuski, A. Rodakiewiez, and F. Kurowski. 16,996. Aug. 6.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Distillation of Petroleum and other Oil, and in Apparatus therefor. T. C. Palmer, of the firm of W. J. Fraser and Co., 98, Commercial-road East, London. Eng. Pat., 21,115. Sept. 14, 1897.

This patent is essentially of a mechanical nature. Instead of using direct heat, the crude oil is fractionated by means of superheated steam, assisted by reduced pressure. There are four figures illustrating the plant employed. A fore-warmer is used for previously heating the oil before it enters the still, any vapours given off during this process being conveyed to a catch-all, and ultimately added to the distillates proper.

Improvements in the Process and Apparatus for the Production of Carbide of Calcium. R. P. Pictet, Geneva, Switzerland. Eng. Pat., 21,508. Sept. 20, 1897. (Under International Convention, Feb. 20, 1897.)

The furnace much resembles a cupola in appearance, only the furnace proper is in the centre, and surrounded by an outer casing, leaving an annular space, in the bottom of which a coke fire heats the outer walls of the inner furnace. The latter is closed at the top, and constricted at the bottom to form a funnel. The charge is heated and partially fused by the coke fires and the combustion of the carbonaceous matter in the charge, heated air being admitted through tuyeres for this purpose. The charge then falls into the contracted neck of the furnace, where it passes through an electric arc maintained between a pair of horizontal carbon poles. Complete fusion results, and the fluid carbide flows out through the bottom of the furnace into moulds. There are three figures.

Improvements in the Manufacture of Artificial Manures. Dr. W. Wolters, 9, Kaiserstrasse, Dresden, Germany. Eng. Pat., 21,175. Sept. 15, 1897.

The phosphoric acid in phosphorites (or bone materials) is rendered soluble in citrate by fusion with silicates of the alkalies or alkaline earths. In preparing the necessary silicates Stassfurt salts may be used, or glass, together with enough chalk to provide the necessary proportions of silicic acid and bases With high grade phosphorites it has been found suitable to use 30 parts of alkaline silicate and 60 of alkaline-earth silicates to every 100 parts of phosphorite. On the manufacturing scale 160 parts of glass, 275 of chalk, and 250 of phosphorite, are fused in a Siemens furnace, the bed of which is made of phosphorite. With Stassfurt salts a convenient mixture is—100 parts of potassium-magnesium sulphate, 25 of chalk, and 22 of sand. It is fused at a white heat, and, after cooling and pulverising, is ready for use as a fertiliser. The proportions essential to success are by no means restricted within narrow limits, but with the Stassfurt salts it is advisable not to use too much sand.

Improvements in the Manufacture of Gas from Garbage and othe Refuse. L. G. Harris, 55, Maitland-street, Toronto, Canada. Eng. Pat., 19,887. Aug. 28, 1897.

The garbage is mixed with a special composition before distillation, so as to render the distillation uniform. This composition is liquid, and is composed of about two quarts of alcohol (or two gallons of water), four pounds of caustic soda, eight pounds of bleaching powder, and three-quarters of a pound of soap bark. To this 100 gallons of light petroleum distillate is added, preference being given to so-called gas oil. The total quantity of liquid so produced is mixed in an agitator with 16,000 pounds of garbage, and the resulting mixture distilled in retorts. It is possible to omit the bleaching powder and soap bark.

Improvements in the Separation and Recovery of Zinc from Liquors containing Zinc in Solution with Iron and other Metals. W. J. Wigg, The Firs, Chester, and E. G. Ballard, Newton-lane, Chester. Eng. Pat., 18,217. Aug. 5, 1897.

In the wet extraction of copper the residual liquors contain a considerable amount of iron and zinc in solution as sulphate or chloride, even after a large proportion of the iron has been removed by certain well-known methods. In order to remove this residual quantity of iron the patentees proceed as follows:—The iron is precipitated with hydroxide of lime (or an alkali), and oxidised by blowing with air. As the result of this treatment, the iron is kept oxidised while the zinc goes back into solution, when the precipitate of iron may readily be removed by filtration.

Even after this treatment the solution of zinc contains traces of iron, which would be prejudicial to the use of the zinc as a pigment. It is, therefore, further purified by the addition of a small quantity of calcium carbonate and constant agitation with air. The whole is then rendered slightly with vitriol, and again blown with air. In this way the whole of the iron is removed by precipitation, leaving a solution of zinc, which is pure save for the presence of small quantities of manganese, nickel, and cobalt. The latter are removed by adding bleaching powder to the hot solution after it has been neutralised, the neutral state being maintained by the addition of a little chalk or limestone. After filtration, the zinc is precipitated, pressed, and calcined, forming a high-grade pigment.

THE USE OF COTTON-SEED OIL IN PAINTS.

AN investigation of the value of cotton-seed oil to be used for paint as a cheap preservative for outside work has recently been made at one of the United States of America Agricultural Experiment Stations. Tests of the drying properties of the oil were made with a view to its use instead of linseed oil. Two methods of testing were used: (A) Boiling the oil with different drying agents in order to increase its drying properties. (B) Treating the oil with gasoline or turpentine. Seventeen experiments were made under (A) using borate of manganese, chloride of lime, black oxide of manganese (MnO_2), nitrous acid, caustic soda, lead acetate, and various mixtures of these substances. The time and temperature of the heating were varied. The prepared oils were mixed and ground with a good quality of "white lead," and the paint thus made applied to pine boards and dried in the sun. The best result was obtained with an oil which had been heated to 170° C. for one hour, with 0·3 per cent. of manganese borate. This paint dried in six and a half hours. The next best paint was made with an oil which was heated forty-five minutes to 70° C. with 1 per cent of sodium hydroxide and then treated with 2 5 per cent. of lead oxide, and heated several (?) hours from 130° to 170° C. This sample, as well as several others, also dried in six and a half hours. But in all cases, the films obtained were less hard and firm than those yielded by linseed oil. Many of the samples required two, six, and even eight days for drying, while others were entirely useless. The oils tested with turpentine and gasoline were less satisfactory. One sample, mixed with 10 parts turpentine, dried in eight and a half hours, giving a fair paint. As a rule, cotton-seed oil affords less gloss and hardness in the film, but somewhat more tenacity than linseed oil. The conclusion reached is that a properly made cotton-seed oil may well replace linseed paints for cheap outdoor work. Red and yellow ochres are most suitable for general use with crude cotton-seed oil, but with well prepared "boiled" oil, it may pay to use the best white lead or white zinc.

MINING AND METALLURGICAL EXHIBITION.—The Council of the Incorporated London Chamber of Mines notifies that it has definitely arranged with the London Exhibitions, Limited, to embody its mining, metallurgical, and machinery exhibition with the Greater Britain Exhibition, to be held at Earl's Court next year. This arrangement is chiefly due to insufficiency of time left to arrange for the International Mining Exhibition which the Chamber proposed to hold, and also to the fact that the Earl's Court authorities have agreed to set aside a larger area for mining exhibits than previously arranged, and that it has now been decided to reserve a considerable section of Earl's Court as a separate mining court at the Greater Britain Exhibition of next year. The London Exhibitions Company has handed over to the London Chamber of Mines the entire control of this mining court, it being agreed that, as far as can be managed, the court shall comprise the Ducal Hall and the Prince's Hall, together with other sites and a large area of outdoor space.

TESTING BONE SUPERPHOSPHATE.

THE difficulties of the task mentioned in the above title were referred to recently in our correspondence columns, and the hope was expressed that the subject might be further investigated for agricultural chemists. It appears that under the auspices of the Italian Federation of Agricultural Syndicates a prize of one thousand francs was offered for a simple and sure method of detecting the presence of mineral superphosphates in bone supers. The prize has been awarded to M. Henri Lasne, of Paris, who has at least added much to our knowledge on this subject, even if the methods he suggests are hardly "simple." At all events, they give promise of being reasonably sure. The Commission, in awarding the prize, states that they do not look upon M. Lasne's suggestions as a complete solution of the problem.

He recommends chemical analysis, but lays most stress on his microscopical method of examination.

As far as chemical analysis is concerned, he recommends the estimation of the phosphoric acid soluble in citrate, sulphuric, and carbonic acids, chlorine, fluorine, lime, iron and alumina, manganese, nitrogen, residue insoluble in water and residue after ignition. In interpreting the figures obtained, importance is attached to the ratio between the soluble phosphoric acid and the lime. As the result of a number of experiments made on superphosphate prepared from de-gelatinised bones, he states that a pure bone super should contain 1·30 to 1·35 parts for each per cent. of phosphoric acid.

The microscopical examination is conducted on the comparative system. M. Lasne has prepared a most extensive series of microphotographs of all kinds of natural phosphates from different sources, and the information so obtained has been made the foundation of a system of comparative examination, by means of which he has been able to unhesitatingly detect the presence of mineral and other phosphates in samples reputed to be pure bone supers, and has even succeeded in many cases in specifying the origin of the adulterating material employed.

NOTES ON FOREIGN CHEMICAL TRADE.

SEVASTOPOL.

ACCORDING to H.M. Consul at Odessa, deposits of *china clay* exist between Balaclava and Baidar, and would be worth prospecting.

Natural Portland cement exists in quantities near Bakchisarai, and a French company is said to have been formed to work it.

Profitable Industries.—There are several industries which might be profitably worked in the neighbourhood, for instance, the manufacture of different kinds of wrapping paper. The Crimea exports a very large quantity of fruit to the large towns of the interior of Russia. Of the choice sorts, each one is wrapped separately in paper before being packed. This in itself necessitates a large supply of the material. The demand amongst grocers, wine and fruit merchants is also very large. All this paper now comes from Moscow, and the railway charges are heavy, whereas the material could be manufactured on the spot at a good profit. Straw, the raw product required for the manufacture of this description of paper, could be obtained in any quantity and for a mere trifle. In the vicinity of Simpheropol there are buildings with water-power for the greater part of the year to the extent of 20 horse-power close at hand, and steam-power is also available.

Soap and candles could also be profitably manufactured. The toilette soaps mostly in use come from France, Moscow, and Warsaw, and obtain a high price. The candles come from Moscow at a heavy railway charge. A manufactory of *soda*, both caustic and crystallised, should be a paying affair. These manufactories are very few and far between in Russia, and the products are dear. An inquiry addressed lately to a firm of Moscow merchants representing a manufactory in the interior, elicited a reply naming something very high as the price of the sodas, but intimating that no orders could be booked for six months ahead.

GOTHENBURG.

The requirements of *alka'i* mainly depend on the description of glass that the bottle and glass works have to manufacture; if white glass is on the order list, alkali must be procured, otherwise soda-ash takes its place. England supplies the bulk of these articles to the Swedish works, which in their turn export large quantities of bottles to Great Britain. This year alkali has been predominant in the import of these two articles.

Each year has brought an increase in the import of *fertilisers*. Much that comes from England, or as in the case with phosphates, from the United States, is carried here in British ships.

Glauber salts is an article that is annually increasing among imports. The glass-works as well as cellulose manufacturers are the most important buyers

The *guano* and *oil mills* on this coast, 23 in number, have been unable to work to any extent worth mentioning, owing to the high price and scarcity of fish. Their production was, however, mostly exported to France and Great Britain.

There is a factory established lately for the purpose of manufacturing lubricating oils, by a patent process, from fish-oil, which is reported to be a complete success.

UDDEVALLA.

Electricity is largely brought into use, and much is expected by its aid. *Waterfalls* of suitable locality and power for electrical purposes have increased immensely in value, and are in great demand.

It was mentioned in last year's report that a factory had been established for the purpose of producing *caustic soda* and *bleaching powder*. This undertaking, laid out on a very extensive scale, has, however, up to date but proved an experimental affair, for none of these products have appeared in the market, and nothing has been done beyond putting up new machinery. It is hoped that success will finally attend this electrical process, if so, it will be colossal, as the power and raw material are there in unlimited quantity.

NAPLES.

Sulphur mines.—The use of explosives other than gunpowder caused a depression in the sulphur industry for many years, but lately there has been a boom in this mineral owing to its use in making sulphite-pulp. This boom has inspired confidence in the owners of the mines of Oliveto Citra, in the province of Salerno. They consider themselves justified in inviting foreign capital to extend their undertaking, and while mining investments should not of course be entered upon without the necessary caution, the large amount of sulphur used here in agriculture forms in itself a considerable local market for the company's output.

The mines are the property of the Società Mineralogica Napoletana, and are situated near the village of Oliveto, about 10 kiloms. (6 miles) from the railway which leads from Eboli to Naples, a line which touches the important ports of Salerno, Torre Annunziata, and Naples.

The mine is rectangular, and lies between the Rivers Sele and Piceglio. The ground explored is about 4,000 by 500 metres in extent, and forms part of a large extinct volcano, and in fact when trenches are sunk sulphuretted steam is found to rise. The deep tubular vents existing on the surface are covered with sublimate of sulphur, and some of them, although they have cooled, evolve sulphur dioxide in large quantities mixed with carbonic acid gas and sulphuretted hydrogen. Close beneath the cultivated ground, burnt volcanic matter is found mixed with sulphur, and the deeper the trench the more sulphur in proportion is laid bare.

Twelve experimental trenches of 50 or 60 metres in length, 12 to 15 metres in breadth, and 5 metres deep have been sunk in sundry parts of this vast superficies of 2,000,000 metres.

By means of these many banks of sulphur have come to light, giving an average of 20 per cent. of useful products incrusted with sublimed sulphur, mixed with strata of sulphate of lime, yielding on an average 45 per cent. Besides these there are some banks in which sulphur is found at as high a percentage as 70.

The mine, as just stated, is situated between two rivers, and is surrounded by wooded country, thickly inhabited. Labour is abundant and cheap, carriage by land and sea is easy, and the mineral is free from arsenic, a most important matter where one great use of it is for dressing vines to neutralise the dire effects of peronospera and phylloxera.

ALGIERS.

Phosphates.—According to the latest available statistics the following numbers indicate the quantity of phosphates extracted in the region of Tebesa during the year 1896 :—

Proprietors.	Situation of Mines.	Quantity Extracted. Tons.
Crookston	Djebel Dyr	66,678
Jacobsen	Djebel Konif	80,127
Société Francaise ..	Ain Kissa	18,000
Total..		164,805

The number of workmen employed in these mines is about 700.

Phosphates have lately been discovered at three places—(1) Tocqueville, (2), Bordj Redir (near Setif), and (3) Rio-Salado. At Tocqueville 212 tons have been extracted, transported, and shipped at Bougie. At Rio-Salado 738 tons were produced during five months with only 100 workmen. The quantity sold amounted to 520 tons, the lowest price realising 40 fr. per ton.

Vitriol Plant.—A French firm recently proposed to erect a sulphuric acid work in the neighbourhood of Philippeville, on the sea shore, but for divers reasons it appears that the project has been abandoned, and that Bona has been chosen instead of Philippeville. If this is true it is greatly to be deplored, as the manufactory would have given work to many, and the iron-pyrites mines in this neighbourhood, and at Ain Sedma, near Collo, would have found an outlet for their produce, which, from its low grade, cannot stand high rates of carriage.

Official Memoranda.

From the Board of Trade Journal.

SPANISH EXPORT DUTIES IN 1898-99.

HE Board of Trade have received, through the Foreign Office a translation of the tariff of Spanish export duties imposed by the nish Budget law of 28th June last, as follows :—

Articles.	Valuation for 1897. Pesetas.	Duties. Pesetas.
tite .. .. per 100 kilos.	8·0 ..	0·20
e .. .. ,, ,,	4·0 ..	0·10
o, hydraulic and cement .. ,, ,,	3·50 ..	0·10
sum . .. . ,, ,,	2·0 ..	0·05
lin .. .. ,, ,,	5·0 ..	0·10
r-spar, heavy spar .. .. ,, ,,	2·0 ..	0·05
pitch, creosote, bitumen, d products derived therefrom ,, ,,	25·0 ..	0·60
sphorus .. .. ton of 1,000 kilos.	10·0 ..	0·25
mony.. .. .. ,, ,, ,,	300·0 ..	7·50
per .. .. .. ,, ,, ,,	34·0 ..	0·85
per blende .. .. ,, ,, ,,	520·0 ..	13·00
.. .. .. ,, ,, ,,	11·0 ..	0·25
pyrites .. .. ,, ,, ,,	12·0 ..	0·30
onate of manganese ,, ,, ,,	20·0 ..	0·50
er mineral manganese ,, ,, ,,	57·0 ..	1·40
and other tanning materials.. per 100 kilos.	14·0 ..	0·35
res and natural earths, for inting .. .. ,, ,,	8·0 ..	0·20
urs in powder or lumps .. ,, ,,	30·0 ..	0·75
o, prepared, paints & varnishes ,, ,,	130·0 ..	3·25
on .. .. ,, ,,	250·0 ..	6·25
hineal .. .. ,, ,,	100·0 ..	10·00
hur .. .. ,, ,,	13·0 ..	0·30
ride of sodium (common salt) ,, ,,	1·50 ..	0·05
ar, crude and lees of wine .. ,, ,,	54·0 ..	1·35
m of tartar .. .. .. ,, ,,	185·0 ..	4·60
lead .. .. ,, ,,	45·0 ..	1·10
entiferous litharge .. .. ,, ,,	65·0 ..	1·60
-argentiferous litharge .. ,, ,,	45·0 ..	1·10
mon glue .. .. .. ,, ,,	85·0 ..	2·10
erine .. .. ,, ,,	100·0 ..	2·50
mical products not specified .. ,, ,,	65·0 ..	1·60
ch .. .. ,, ,,	55·0 ..	1·35
mon soap .. .. .. ,, ,,	52·0 ..	1·30
rine and wax, in lumps .. ,, ,,	150·0 ..	3·75
o, in candles .. .. .. ,, ,,	165·0 ..	4·10

TARIFF CHANGES.

despatch has been received from H.M. Minister at the Hague, smitting copy and translation of a Royal Decree, according to h exemption from import duty shall be granted for acetate of soda acetate of calcium, required in the work of dyeing and printing le fabrics, provided that those acetates by mixture with one or e other substances are rendered incapable of having vinegar acted from them for household consumption.

he following decisions relating to the classification of articles in the toms Tariff, and the application of the Customs Laws of the United es, have recently been given by the authorities in that country.

panese needle *antimony* is dutiable at 20 per cent. *ad val.* as etal unwrought" under paragraph 183, Act of 1897.

oal-tar sheep dip is dutiable as a chemical compound under para-h 3 of Act of 1897, at 25 per cent. *ad val.*

obacco sheep dip is assessed for duty at the rate of 20 per cent. *ad* as an unenumerated manufactured article under section 6 of the of 1897.

heep-dip composed of sulphide of arsenic is entitled to free entry er paragraphs 479 and 657 of the Act of 1897.

INDUSTRIES OF BRITISH INDIA.

he Board of Trade have received, through the India Office, copies report and tables giving such particulars as are obtainable of cer-Indian industries carried on upon a somewhat extensive scale, of ch the following is an abstract.

aking the headings in alphabetical order, the table includes :—

one-crushing mills.—Seven at Bombay, two in Bengal, one at dras, one in Malabar, two at Coimbatore, one in South Canara, two at Karachi.

ement works.—Only one cement work is reported, located in dras.

lass factory. One is in operation near Calcutta for the manufac- of glass in accordance with European methods. Another has been established in Ahmadabad, but has not yet commenced work. There are various small glass-making establishments in other places, but when they do not use broken imported glass they turn out articles of a rough and inferior class, though in some cases artistic in form and colour.

Indigo factories.—There are a great number of these in Bengal and the North-Western Provinces, all owned as private concerns, only three—two in Bengal and the other in the North-Western Provinces—being managed on the joint-stock principle with limited liability. Great numbers are now owned and worked by natives, but these are still singly small factories. In the Madras Presidency also there are a great number of indigo factories, mostly small concerns. In the Panjab there are said to be 19 factories.

The table must be taken more as an indication of the extent of the industry than as a complete record.

Oil mills and wells.—Incomplete. The expression of oil is largely carried on in various places, though the mills in most cases are small. The list includes the petroleum wells in Burma, which are the only wells as yet worked on a large scale, the wells in Assam, and the petroleum refineries at work at Rangoon and at Lakhimpur in Assam.

Saltpetre refineries.—There are a great number of these, worked by natives on a small scale, in Madras, in Bihar, the North-Western Provinces, and about a dozen in and around Calcutta ; one of the latter owned and worked by a European firm. The table is very imperfect.

Soap factories.—Three at Meerut. One of these (the N. W. Soap Company, with a branch at Calcutta) makes very good toilet soaps. There are many small native soap works in Bengal and other provinces, but the soap manufactured is crude and inferior.

SCIENCE RESEARCH SCHOLARSHIPS.

THE Commissioners for the Exhibition of 1851 have issued a special report which has been presented to them by the Science Scholarships Committee. The committee, which consisted of Sir Henry Roscoe (chairman), Lord Rayleigh, Lord Kelvin, the late Lord Playfair, Sir J. Norman Lockyer, and Dr. William Garnett, now that the first five annual series of science research scholarships (1891-95) have practically run their course, considered the present a fitting opportunity to submit to the Commission a complete return showing the working of the scheme up to the present time.

The committee, after briefly relating the circumstances which led to the foundation in 1890 of these research scholarships, tenable by promising students in provincial colleges of science, as a means of enabling the provinces to benefit by the resources at the disposal of the Commissioners, state that of the 79 scholars appointed in the five years from 1891 to 1895 39 are engaged as teachers in science colleges or other educational institutions, 26 have obtained engagements in manufacturing firms or public departments, or have embarked on a professional career, while the remainder are nearly all still engaged in study or private research. In some cases the professors or other experts to whom the reports of the scholars are referred, do not express a favourable opinion of the work done. The committee, however, point out that the referees have not the materials before them to enable them to judge of the educational result, and that as a matter of fact, some of the scholars whose researches have been unfavourably commented on are now successfully filling important positions, and have evidently derived great benefit from their scholarships in directions other than research. The committee mention that they have addressed letters of inquiry to the governing bodies of the institutions to which the scholarships have been allotted, and to other educational institutions and manufacturing firms in which scholars are employed, with the view of ascertaining "whether the working of the scheme has resulted in aiding the development of scientific culture and technical training to such an extent as the Commissioners might reasonably hope for." From the replies which have been so far received it is clear that the authorities and the firms concerned fully recognise the great benefits which scientific education has derived from the scheme. Indeed, many of them make suggestions for its extension in various directions. The committee, after paying a tribute to the memory of the late Lord Playfair, who originated the idea of the scholarships and made the carrying out of the scheme his particular care, suggest that an early opportunity be taken of increasing the funds available for science scholarships. Lists of those whose scholarships have been exceptionally renewed, and of those who have been appointed to scholarships for 1898, with various particulars about past and present scholars, are appended to the report.

RECENT TRADE MARKS.—"Town Crier" ; for perfumery, including toilet articles, preparations for the teeth and hair, and perfumed soap. By the United Alkali Company (Limited), G11, Exchange Buildings, Liverpool. "Volenite" ; for chemical substances used in manufactures, photography, or philosophical research in Class 1 ; for mineral and aërated waters in Class 44. By Volenite (Limited), 16 St. Helen's Place, London, E.C., manufacturers.

Reports of Companies.

BAKU RUSSIAN PETROLEUM COMPANY (LTD.)

The statutory general meeting was held last week, at Winchester House, E C. Sir James Kitson, M.P., who presided, stated that the company was issued with a capital of £574,100. in ordinary shares, and £573,100. in preference shares, making a total of £1,147,200., and this amount had been fully subscribed. The company acquired the properties of Messrs. Arafelloff and Co. and Messrs. Boudagoff Brothers on July 1st (old style). This property consisted of a freehold of 227 acres and a leasehold of 33 acres. With regard to their obtaining the permission of the Russian Imperial Government to operate in Russia, he might say that particularly on the part of M. de Witte, the Minister of Finance, they had a most courteous and encouraging reception, and there was clear evidence of a desire on the Minister's part to extend the employment of English capital in industrial occupations in Russia. For his own part, he (the chairman) would express a desire that the friendly commercial relations which M. de Witte favoured between the two countries might be extended to friendly political relations. With reference to the question of recognition, the agent of the Ministry of Finance in London wrote to *The Times* on the 20th ult. stating that the petition and memorandum and articles of association of the company had been approved by the Russian Government, and the company was now legally recognised in Russia. Further than that, they had just received a telegram from Mr. Whishaw, the agent at St. Petersburg, to say that he was posting to Mr. Tweedy a document from the Finance Department, which stated that the company was fully recognised, and that the Senate was ordered to publish the same. As to their properties, they had one at Bibi Eibat, adjoining the property of the Russian Petroleum and Liquid Fuel Co., which was unfortunately suffering from a great fire. Then they had further plots at Balakhany, Romany, and Sabunchi. These properties were widely distributed, so that there was no danger of any great calamity to their property from fire. The properties of Messrs. Arafelloff & Co. covered an area of 160 acres, and those of Messrs. Boudagoff Brothers covered an area of 100 acres. A large proportion of this acreage had not yet been worked, so that there was an opportunity for very great development in the exploitation of their lands, and for a very material increase in their production. In regard to management they had been fortunate in retaining the services of M. Schumacher, the general manager of the Russian Company, who would take over the management and disposal of the production of the two companies; and Mr. Tweedy, the London representative of the Russian company would also become the London representative of the Baku Company. These gentlemen were dependent for their full remuneration on the commission which they would receive on the net profits of the undertaking. The Arafelloff property had only been in the company's possession for one month, but the weekly output had already increased from 215,000 poods to 255,000 poods (estimated). Mr. Tweedy expected that in a month's time the output would be 350,000 poods per week, and that there would be a very considerable advance upon this production as time went on. The production from this property was entirely derived from pumping; they did not rely for a steady increase upon fountains, which, however, might occur at any time. Another gratifying feature was that the prices of crude oil, astatki, and kerosine showed an advance as compared with 1897, and with increased production and improved prices the directors felt justified in holding sanguine views as to the future of these properties. The production of the Boudagoff property also showed an increase. He was endeavouring to make arrangements to go out with Mr. Henry N. Gladstone (a director) to take a thorough view of the property. They would thus be able to inform themselves of its position and prospects, and as to the best means of developing the company's resources. He did not anticipate any difficulty whatever in obtaining a Stock Exchange quotation. In reply to a question, the chairman said that the directors had received information that the fire on the Russian Company's property, which had caused an estimated loss of 7,000,000 or 8,000,000 poods, was still burning, but very little further damage was apprehended. He might add that the production to date had been 62,000,000 poods, so that the net production, which had been sold, was 54,000,000 poods, whereas the prospectus of the Russian company placed the average production at 32,000,000 poods; therefore, notwithstanding the loss by fire, they had received and sold in nine months 22,000,000 poods over the figures given in the prospectus.

Obituary.—We sincerely regret to announce the death of Mr. John A. R. Newlands, at Clapton. He was the only British chemist who shares with Mendeléef, Lothar Meyer, and De Chancourtois the honour of having indicated the periodical law of the elements. Newlands published his first note on the subject in 1863, and in 1866 more fully developed his ideas by a paper on "The Law of Octaves and the Causes of Numerical Relations among the Atomic Weights," which he read before the Chemical Society on March 1, 1866.

Correspondence.

**** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

MANUFACTURE OF MISCIBLE WOOD NAPHTHA.

(To the Editor of the Chemical Trade Journal.)

Sir,—Thanks for your answer to our letter of 5th in your Correspondence Column.

By the word "yield" we meant the quantity produced; we have no difficulty with colour, etc. We believe some lime does not neutralise acid so well as others. Can you give us the constituents that a good lime for the purpose ought to contain? Also are there any means of adding chemicals to limes, when they are deficient in those constituents, to make them better?

Yours, etc.,
P. C. Co.

THE BRITISH ASSOCIATION.

THE PROSPECTIVE PROGRAMME.

THE organisation of the work to be done in various sections when the British Association meets at Bristol is proceeding apace, and in many of the sections the programme is practically complete. The real hard work of the association is done at the various sectional meetings. Some of those which will take place in Bristol appear to be of a particularly interesting character.

In the chemical section the president is Professor F. R Jupp, F.R S It is expected that his address will deal principally with sterio-chemistry and vitalism. Sterio-chemistry is one of the most important and interesting developments of organic modern chemistry, and in Professor Jupp's address an attempt will be made to show that the results of modern sterio-chemical research preclude an explanation of the phenomena of life in terms of the mechanics of atoms. A joint meeting of sections A and B will be held on Monday, September 12th, to discuss the results of the recent eclipse expeditions, when it is hoped Captain Abney and Dr. T. E. Thorpe will be present to represent the chemists. Professor W. Ramsey and Dr. Morris Fraser will communicate an account of their recent discoveries in a paper entitled, "On the Extraction of Argon," and the spectra of the new constituents of the atmosphere will be exhibited at the soirée at Clifton College. Dr. W. J. Russell will read a paper, illustrated by slides, on his recent photographic work, which deals with peculiar radiations which emanate from metallic surfaces, and which are capable of affecting a photographic plate. "Some Researches on the Thermal Properties of Gases and Liquids" is the title of a paper by Professor Sidney Young, which will embody and summarise the results of a long series of important investigations, and which will include among other points of more general interest an account of the author's work on practical distillation and its application to the separation of pure hydro-carbons from American petroleum. Mr. Wertheimer has promised a paper on "The Influence of Examinations on the Teaching of Chemistry," a subject which will be considered side by side with the annual report of the committee of the section of which Dr. J. H. Gladstone, F.R.S., is chairman, on "The Teaching of Science in Schools." Several other papers of a more technical character have already been accepted, which together with the reports of committees, give promise of good and plentiful work for the section.

In the Economic Science Section the president is Professor Bonar, LL.D. He will deliver his address on Thursday, September 8. On Friday a paper will be read by Mr. L L. Price on "Industrial Conciliation." Monday will be the Municipal Enterprise Day. Mr. E. Cannan will lead off with a paper on "Municipal Enterprise." Mr. George Pearson will contribute a paper on "Municipalities and the Electric Supply," and Mr. W. M. Acworth will start a discussion on "Rectification of Municipal Boundaries." The same day a paper of considerable interest will be contributed by Mr. George E. Davies on "Sugar Bounties," and one, which is expected to excite much interest and discussion among business men, by Mr. John R. Galloway, of Manchester, on "Shipping Rings and Corners." On Tuesday an important paper will be read by M. A. L Bowley on "Wages since 1840." This will bring the investigations he has made on the subject up to date, and will supplement his already important investigations into the subject. Mr. H. Vivian will read a paper on "Labour Co-partnership," and Prof. Silvanus Thompson will bring forward a proposal relating to "Uniformity of Size in Publications of Local Societies."

One of the most important meetings of world-wide interest to experts will be that of the Conference on Terrestrial Magnetism. To attend this conference delegates from a great number of foreign countries are expected.

INDICATORS IN VOLUMETRIC ANALYSIS.

IN a recent paper on this subject by Mr. J. Waddell, the author shows that the addition of ether, benzene, or chloroform, and in some, but not in all cases, also of alcohol or acetone, to aqueous or alcoholic solutions in which the indicators fluorescein, phenacetolin, phenolphthalein, paranitrophenol, cyanine, methyl orange, turmeric, lacmoid, and corallin are present in the form of their salts causes a change in colour to that of the free acid or base. This change of colour takes place much more readily when the indicator is present in the form of its acetate than when in that of its hydrochloride, and when in the form of its ammonium salt than when in that of its potassium salt. The author apparently considers that the change of colour is most probably explained by the assumption that the electrolytic dissociation of the salt to whose ion the colour is due is greatly reduced by the organic solvents; but at the close of the article he raises two objections to this hypothesis; namely, first, that it is then necessary to assume that the undissociated indicator salt and acid or base of the indicator have just the same colour in all the cases investigated; and, second, that the hypothesis does not offer any explanation of the fact that the salts of weak acids (acetic) or bases (ammonia) undergo the change so much more readily than those of strong acids and bases (like hydrochloric acid and potash). These objections seem to warrant completely the rejection of the above explanation; and it appears that the following one, which is in part suggested by the author himself, is far more probable; the very weak acids and bases of which indicators consist are so much less dissociated in organic solvents than in water, that their salts become nearly completely hydrolysed when these solvents are added to the aqueous solutions of the salts, in spite of the fact that the concentration of the ions of the water is also reduced somewhat; hence the addition of the solvents liberates the free indicator acid or base, which exhibits its usual colour, and it will, of course, liberate it much more readily if the other component of the salt is also a weak base or acid. By noting whether the change of colour occurred on adding the solvents to the acid solution, or to the alkaline solution of the indicator, or to both solutions, the author was able to determine whether it acts as a base or as an acid, or as both. He concludes from his experiments that phenolphthalein, paranitrophenol, and turmeric are acids; that cyanine, methyl orange and lacmoid are bases; and that fluorescein, phenacetolin and corallin act both as acids and bases.

Trade Notes.

NITRATE OF SODA IN RUSSIA.—For the last two years the uses and advantages of nitrate of soda have been receiving the attention of farmers, fruit-growers, viticulturists, and sugar beetroot growers throughout Russia, articles appearing upon the subject in the newspapers both in North and South Russia, while an active propaganda by means of circulars and pamphlets is spreading throughout the country. The valuable assistance of the rural communes and other official bodies has been enlisted in carrying out trials of this nitrate upon grain, sugar-beets, grape vines, &c. Orders in this rapidly-growing trade are going almost exclusively to Germany, where Russians find they can buy on three to six months' credit as cheaply as they can from England upon cash against bills of lading. It is to be feared that unless British firms are willing to waive the point, this trade will be carried on exclusively through Hamburg, whereas upon equal terms the Russians prefer to do business with English firms. [And why not sulphate of ammonia?—ED., *C. T. J.*]

HELLER'S STEEL SHELF BOX.—The construction of this box is novel, and has the advantage that all the parts are flush, without the aid of dovetailing. The body of the box is made of galvanised steel plate, of sufficient strength to stand handling for many years without injury. The front and back ends are made of ¾ inch wood, and the ends are secured to the body by the steel plate being embedded into their substance on both sides and bottom, they are further prevented from parting company by steel wire brads, which are driven from inside of box through wood and steel, but not long enough to show outside, making the whole box very secure and with the advantage of a perfectly smooth outside surface both front and back. They will be of special use for storing nuts, bolts, and similar hardware articles, both in the ironmongery trade and in works' stores. The sole agents for this country are Messrs. J. Keeves & Sons, Ltd., Boundary Street, Shoreditch, N.E.

NEW CARBIDE WORKS.—Messrs. Schuckert and Co, of Nürnberg, Germany, manufacturers of electrical machinery, report that they have sold electrical machinery aggregating 20,500 horse-power, to the following companies: Ready to operate in the summer of 1899: Elektrizitätswerk Lonza in Gampel (Wallis) 2,500 horse-power. Ready to operate in the winter of 1898-99: Elektrizitätswerk Lonza in Gampel, high voltage, 2,500 horse-power. Actieselskabet Hafslund, near Sarpsborg, Norway, 5,000 horse-power. Bosnische Elektrizitäts-Aktiengesellschaft, Vienna. Works at Iajce, Bosnia, 8,000 horse-power. Ready to operate in the spring of 1899: Société Espagnole des carbures métalliques (Bullier's patent). Works in Berga (Catelonia), 2,500 horse-power. The annual production of these works together will be about 20,000,000 kilograms of carbide, or 22,000 short tons. The Aluminum-Industrie-Actien-Gesellschaft Neuhausen at Scheffhausen, are about putting up a new works at Lend-Gastein of about 7,500 horse-power.

THE NORMANTON BENZOL FATALITY.—At the Wakefield Police Court, recently, the Whitwood Chemical Company, Normanton, were charged with breaches of the Factory and Workshops Act. The Government Inspector of Factories, who prosecuted, said that the firm were first summoned for employing a boy named Thomas Sargent, under 16 years of age, without having obtained a certificate of fitness from the duly-appointed surgeon of the district. On June 15 Sargent, who was employed in the benzol house at the Whitwood Chemical Works, was engaged in skimming some liquid in a tub, and shortly afterwards he was found dead. On July 20 he visited the works, and found that, although the lad had been employed in the benzol house eight weeks, the firm had not obtained a certificate as to his fitness. The defendant firm were also charged with neglecting to comply with some special rules made for chemical works by failing to fence two caustic-soda vessels. In the first case the defendants were fined £5. 16s., and in the second £1 18s. 6d.

NEW PORCELAIN.—A complete revolution would take place in the ceramic industry if a new process, called "Thonguss" (clay casting) should be successful. The mass is not, as heretofore, worked cold upon the potter's lathe or pressed into a mould, but is finely ground after careful drying, then melted at about 3,215° C. in an electric furnace and poured in a heated, fireproof casting mould. Glazing becomes unnecessary in most cases, if the walls of the mould are sufficiently smooth. Otherwise it is allowed to cool off after the solidification of the cast to about 1,860° C., and finely powdered glass is thrown on in a uniform, thin layer. The advantage of the new process is said to consist (aside from the considerably reduced cost) in an almost complete prevention of the unforeseen shrinking of the mass on cooling; so that henceforth instruments of precision and accurately-divided measuring vessels of every description can also be made from porcelain. By means of a still unpublished process, viz, the admixture of a suitable substance to the melted clay, the inventor expects to render the cooled mass pliable—malleable—and also to make a remelting considerably more difficult. A difficulty which still remains unsolved with the clay casting method is the coloured decoration. Solid coloured designs, such as the much employed onion pattern, can be readily pressed with suitable stamps on the melting glass layer which forms with the said glazing method; but one has not been successful, for instance, to produce in clay casting the popular coffee cups decorated with flowers by hand painting.

THE ALLEGED DANGERS OF TINNED FOODS.—A special committee of the London Chamber of Commerce has for some time past been engaged in investigating cases of alleged poisoning through eating tinned foods, with the result, they say, that it has been invariably found that such allegations were unfounded. It is stated that at the present season of the year, when preserved foods are largely resorted to, it is important that the public mind should not be unduly influenced by the alarmists report which are occasionally published, and which are usually based upon theories that are demolished when submitted to the test of an official inquiry. For instance, in the latest case investigated, by the Chamber of Commerce Committee, it was alleged in local newspapers that the death of a young married woman at Tunbridge Wells was due to ptomaine poisoning, consequent on eating tinned salmon. The coroner, after preliminary inquires, decided to communicate with the Home Office, by whose orders the contents of the stomach were analysed by Dr. Stevenson, Government expert, who gave evidence as to the results. His opinion was that the cause of death was distinctly due to poisoning by nitre (with which the jury agreed), and could not be attributed to ptomaine poisoning through eating tinned salmon. In the course of his evidence, Dr. Stevenson said that if, as had been stated, as many as 200,000,000 tins of food were consumed in one year the cases of poisoning were infinitesimal. He urged that it was desirable to turn out the contents of a tin as soon as opened. The Committee have further ascertained from Dr. Stevenson that so far as ptomaine poisoning being specially identified with tinned provisions, it also arises in connection with fresh meats of all kinds.

More Smoke Observations.—At a recent meeting of the Northwich Rural Council, Mr. Chas. Griffiths, J.P., brought forward serious complaints of smoke emissions from the chemical and salt works of Lostock Gralam. He asserted that his farm had deteriorated to the extent of half its original value, that the trees, hedges, and fair country had been ruined, and that, owing to the terrible chemical fumes and smoke, it was not fit to live in the district. Mr. Hewitt asserted that there were no excessive emissions from the chemical works. As to the salt works, they were carried on like all others, and, unfortunately, the system in vogue was just the same as that followed 2,000 years ago, with the result that there was an enormous waste of fuel. It was resolved that the surveyor should take observations of smoke nuisances throughout Lostock, Marston, and Wincham district.

Coke Ovens for Middle Hulton.—Messrs. Darby, the well-known firm of coke oven builders, of Brymbo, Denbighshire, have been engaged by the Bridgewater Trustees to lay down a battery of 70 retort ovens near their Brackley Colliery, Middle Hulton The ovens will be constructed on the Semet Solvay system. In the past there has been a good deal of prejudice against retort coke, but the firm claim that with the increased yield of coke per ton of fuel, and the substantial return in by-products the comparison of the old system, known as the beehive, with retort ovens, is highly favourable to the latter, whilst retort coke fetches the same price as beehive coke made from similar fuel. Taking coke at 12s. per ton, sulphate of ammonia at £8. 15s. per ton, and light oils (containing 73 per cent. of benzols) at 7½d. per gallon, the gross value obtained from 100 tons of dry fuel containing 30 per cent. of volatile matter would in the aggregate amount to about £67. As to the cost, a retort oven to produce 25 tons of coke per week, with full complement of chemical plant to recover the products mentioned, entails an expenditure of about £800., when 50 ovens are erected together. The ovens have now been in the course of construction for several months past, and when complete, they will find employment for a fairly large number of persons.

Fire at an Oil Works.—About ten o'clock on Wednesday night a fire broke out in the oil refinery of Messrs. Colledge, Roy, and Co., 5, Chase-street, Red Bank, Manchester. The building is one of three storeys, and there is a wooden erection adjoining. The nature of the contents, tallow and such like, caused an instant and vivid blaze, which lighted up the sky for a time quite powerfully, and would probably give rise to the impression that the fire was a bigger affair than was actually the case. At it was, the density of the population all round, and the close proximity of the lodging-houses, with their numerous inhabitants, made it sufficiently important that the fire should be at once brought under control. The fire brigade from Jackson's Row, with its auxiliaries from the branch depôts, was quickly at work under the chief officer, Mr. Savage. The men worked with commendable energy, and in a short space of time got the fire within bounds. For a little while, however, it blazed away fiercely, and caused no little excitement among the people who live thereabouts. They had turned out to watch the spectacle, and the task of keeping them at a convenient distance was undertaken by a staff of police who, like the firemen, did their work very efficiently. The supply of water was very abundant, and the men had, after all, no difficulty in saving the houses round about. The refinery, however, was greatly damaged, and lost its roof and part of the floors, but the extent of the mischief and its origin have not yet been ascertained. Some of the men were left on the premises all night to cope with a possible renewal of the fire.

Fireproofing with Expanded Metal.—A demonstration of the usefulness of "expanded metal" as a fire-proof building material is being given just now in Birmingham, on the ground that has recently been cleared for building operations in connection with the widening of Digbeth. "Expanded metal" consists of sheets of metal mechanically slit or opened out, so as to produce trellis work which can be utilised for a great number of purposes to which wirework is applied. It is now used extensively instead of laths for plastering, and as a binding material in the construction of concrete floors. In the latter case the metal used is drawn steel, and it is claimed that floors so constructed will bear in proportion to their thickness a far greater weight than ordinary concrete floors, while half the usual number of supporting girders may be dispensed with, and the fire-resisting property is very considerably increased. Plastering on the same system can be used, in an ornamental form if desired, to protect the structural iron-work, the simplest plan being that of a false ceiling a few inches below the floor. A structure has been provided in Digbeth illustrating the use of the system in concrete floors, suspended ceilings, and roofs. This is being tested by piling up pig iron to weights greatly exceeding those usually provided for, and by keeping up fires underneath with the object of showing how great a heat the expanded metal floors will endure without giving way, and the long period for which the portions protected by the false ceilings will remain cool in such circumstances. Observations on the result of the experiments are being made by Mr. H. Price, building surveyor to the Corporation, and Mr. Teviotdale, assistant superintendent of the fire brigade.

Commercial Intelligence and Independence. In a note added to the recent report of the Committee of Inquiry on this subject, Mr. W. H. Holland says:—"I wish to accentuate my opinion that it is of vital importance that British commerce should continue to look for its expansion chiefly to the individual energy and capacity of its traders, and, further, that it is a sound principle that the Government should not be expected to do for the trader what he is able to do for himself. But beyond these limits I believe there is a wide field for such services as only a Government can render. I have, therefore, signed the report, because I am in favour of the experiment of a Commercial Intelligence Office being tried, with the view of testing by actual experience how far such assistance on the part of the Government is called for, and to what extent it can be usefully given."

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue to drag along at 9½d. for both 90's and 50/90's. The position is beginning to engage the serious attention of producers, and it is possible that some organisation of the production may be arranged in the near future. Carbolic acids are quiet. Solvent naphtha is worth about 1s. 2d. and crude 4½d. Anthracene is lifeless. Pitch continues firm at 23s. 6d. to 24s. 6d. f.o.b., and the outlook is said to be rather more encouraging.

Sulphate of ammonia is very firm, the market having improved, and prices likewise. There has been a fair amount of business carried through. Forward, Beckton asks £9. 12s. 6d., Oct./Dec. The prompt market closes firm at £10. for Beckton, London outside makes £10. to £10. 2s. 6d.; Liverpool, £10.; Hull, £9. 18s. 9d.; and Leith, £10. to £10 2s. 6d. Nitrate slow of sale at 7s. 7½d. cwt. Forward market active.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is a better general demand for the main products, but values show no improvement. Quotations for caustic soda remain as last week, viz.:—f.o.b. Liverpool 77 % £8.; 74 % £7. 15s.; 70 % £7. 2s. 6d.; 60 % £6. 2s. 6d. net, 10 ton lots. Rather easier rates are quoted for forward delivery. Bleaching powder is steady at £5. to £5. 2s. 6d. f.o.r., and there is some inquiry for next year. Chlorates are without further change. Potash at 3⅜d. to 3¾d. and soda 3⅝d. per lb. Saltcake is firm at 25s. bulk, on rails makers' works, and considerable business has been done thereat for next year. Ammonia alkali, 58% steady at £4. 2s. 6. bags f.o.r. Soda crystals and bicarbonate are firm and prices unaltered. Sulphate of copper steady at £16. 12s. 6d. f.o.b., and high prices are still quoted forward. White powdered arsenic is selling more freely at £14 5s. od. Garston, £14. 10s. for best brands. Prussiate of potash rather easier at 6¾d. per lb. Cyanide, 1s. 1d. per lb. Acetate of lime (brown) steady at £5. to £5. 5s. c.i.f.; grey, £7. 5s. per ton. Acetate of lead quiet at £26. Nitrate of lead in fair inquiry at £21. In acetate of soda, there is rather more doing at £11. 15s. to £12. c.i.f. Sulphocyanides weaker. Borax is unchanged, and demand, generally, is quiet. Trade in carbolic acids is unusually slack for the period of the year. Ammonia, muriate, continues to sell at low rates. Carbonate 3d. per lb. Nitrate of soda is a steady market, and quotations rule from 7s. 6d. to 7s. 7½d. per cwt. There is more general demand for green copperas, and prices are well maintained. Potash, caustic and carbonate, are selling freely at current rates. Permanganate quiet at 62s. 6d. Oxalic acid, 3d. per lb.

REPORT ON MANURE MATERIAL.

The market during the past week has shown signs of improvement for manure material in general, with prices tending in an upward direction.

Owing to the continued good Continental demand for 75/80% Florida phosphate rock, shippers are very firm, quotations being 8¼d. to 8½d. per unit. Quotations for South Carolina and similar grade Algerian may be put at 6d. to 6¼d. per unit, c.i.f. good U.K. ports.

The market for East Indian bone meal continues firm; but there is no actual business reported, inasmuch as £4. 10s. per ton ex-quay is asked, this price being above buyers' idea of value.

Nitrate of soda is quoted on spot, for fine quality, 7s. 7½d. per cwt., with little business passing; but in the forward position there is considerable activity, at full prices.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron firm: Scotch warrants closed at 47s. 6½d.; Middlesbro', 42s. 2½d. cash; and hematite, 52s. 11½d. Copper active: Chili bars, G.O.B.'s and G.M.B.'s, closed at £51. 17s. 6d. to £52. 2s. 6d. cash, and £52. 2s. 6d. to £52. 7s. 6d.

three months. Tin easier: Straits closed at £74. 12s 6d. to £75. 2s. 6d. cash, and £74 15s to £75. 5s. three months; English ingots, £77. 10s. to £78. Lead steady: Spanish, £12. 16s. 3d. to £12. 17s. 6d., English, £13. 3s. 6d; Silesian spelter, ordinary, £20. 7s. 9d. to £20. 10s. Nickel, 1s. 2½d. Antimony, £37. to £37. 10s. Quicksilver: First hands, £7. 12s 6d.; second hands, £7. 12s. *Copper shares* steady: Cape, 4⅝ to 4¾; Copiapo, 2 7/8 to 2 7/8; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅝ to 3⅞; Rio Tinto, 28⅞ to 29; Tharsis, 6½ to 6¾.

GLASGOW, Wednesday.—Market steady, with a fair business; Scotch done at 47s. 6½d. 47s. 7d., 47s. 6d., and 47s. 6½d. cash; also at 47s. 9d., 47s. 8d., and 47s. 9d. month; buyers, 47s. 6½d. cash; sellers, 47s 7d. Cleveland done at 52s. 2½d. cash, and 52s. 4d. to 52s. 4½d. month; buyers, 52s 2½d. cash; sellers, 52s. 3d. Cumberland hematite done at 52s. 11½d. to 53s. cash, and 53s. 1½d. to 53s 2½d month; sellers, 53s cash. Middlesbrough hematite, idle.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is moving more freely, and the demand has decidedly improved. Lagos has been done at £21. transit, and Benin at £19. Olive is scarce and strong, surplus stocks having been disposed of at full prices. Seville is quoted £31. 10s. to £32. 10s. per tun, and Malaga up to £34. to arrive according to shipment. Linseed is steady, with Liverpool makes in export casks quoted 18s. to 18s. 6d. per cwt. Cottonseed steady, and in fair demand at 16s. to 16s. 3d. per cwt. for Liverpool refined. Castor oil firm, but rather slow of sale, with good seconds Calcutta, 3¼d.; Madras, 3d. to 3 1/16d per lb., while first pressure French continues to sell at 3 1/16d. per lb. Tallow is steady as regards price, but there is very little business passing. Resin is firm at recent rates for all grades. Spirits of turpentine are moving fairly well at 22s. 6d. per cwt. Petroleum steady, with American at 5 7/8d to 7¼d., and Russian refined 5d. per gallon.

CAKES.—American Western linseed oilcakes are quiet, and the previous quotation of £5. 13s. 9d. to £6. 2s. 6d. is maintained, whilst Liverpool makes attracted a fair amount of attention at £7. to £8. per ton, according to brand. American decorticated cottonseed cakes are also firm at £5. 5s. to £5. 17s. 6d., with Liverpool-made at £5. 15s. to £6. 10s., and a fair business doing, whilst undecorticated are in only moderate request at £3. 15s. to £4 5s. per ton, as in quality. Egyptian cottonseed cakes continue to be firmly held for £3. 15s. per ton, but only very moderate sales are being made, the high price asked rather checking business for the time being.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The market value of oils continues to show some little improvement, even upon last week's quotations; yet stocks are very low, and values soon affected by a small demand. The imports to date, as against the same time a year ago, have been:—Wheat, 1,794,249 qrs. against 1,425,506 qrs.; flour, 157,783 cwts. against 224,848 cwts.; linseed, 225,604 qrs. against 392,108 qrs.; rapeseed, 50,585 qrs. against 56,689 qrs.; cottonseed, 121,147 tons against 125,609 tons; oilcake, 8,733 tons against 6,945 tons; olive oil, 4,148 tuns against 3,289 tuns. Linseed oil, spot 15s. 10½d. naked, rather buyers; month 15s. 9d.; forward last four months, 15/-, buyers. Boiled and refined, £1. to £1. 10s. per ton, extra. Refined cotton oil, 14s. spot naked, the same also being quotation for month; forward, Nov./April, 13s. 4½d.; crude, spot and month, 12s. 10½d., and Nov./April, 12s. 4½d. paid. Olive oil unchanged. Castor oil, extracted here, £28. 10s. per ton in barrels: 3 1/16d. per lb. in cases for first pressure; £27. 10s. in barrels and 3 1/16d. per lb. in cases for second pressure. Olive oil soaps unchanged, and too high in price to encourage much business. Resins unchanged. Yorkshire brown grease, £7. 10s. to £9. per ton.

CAKES.—The market values are firm, which no doubt is enabling the foreign made cakes to find a steady market here, whilst mills here are practically doing nothing, in the face of which new mills are being built. The crusher here should be less dependent upon the merchant for his seed. Linseed cakes quiet, but firm: best makes, 95% pure, £7. 5s. to £7. 7s. 6d. per ton. Oilcakes (linseed), £6. 5s. to £6. 7s 6d. Russians, £6. 15s. to £7; Americans, £6. 10s. to £6. 12s. 6d. Cotton cakes quiet but firm; best makes, £4.; seconds, £3. 17s. 6d. Decorticated, £6. Rape cakes, Black Sea, £4. per ton.

PAINTS in steady demand. Paints from £9. per ton. Ready mixed in tins, £24. Black varnish, £5 10s. per ton. Disinfecting powder: 5% carbolic, £3., to £4. 10s. for 20%. Fluid from 10d. per gallon.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Since the rearrangement of the position of burning oil by the Scotch Companies, contract making against the new season approaching has been going on at a moderate rate The raised price has been generally acquiesced in by the buyers, and the makers anticipate a fair bulk of business as a whole after the present operation of contract making has been brought to a close. These contracts cover the whole of the consumptive season, deliveries taking place according to the requirements of the consumers, and at the price now agreed on Sulphate of ammonia has been going very strong all through since last report, and £9 17s. 6d. spot Leith has been done, that being about the value at the time of writing. The article is scarce and holders are very independent. Sulphate of copper and chlorates remain firm. The other chemicals are quiet, but prices show no change worth noting.

Chief prices current are:—Soda crystals, £2. 5s. to £2 12s 6d. net. Tyne, soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 15s. od., 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £6. 5s. od. nett, Tyne; saltcake, 25s. od.; borax, English refined, £14., and boracic acid, £24. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d, and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d less 5%, Liverpool; nitrate of soda, 7s. 6d to 7s. 7½d.; sulphate of ammonia, £9. 17s. 6d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port; sulphate of copper, £16. 10s. od. less 5% Liverpool; paraffin scale, hard, 1 3/16d. to 1½d. per lb., soft, 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 6d., and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5 0s., 885' £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 34,947 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue dull with little or no change in the market. Soda crystals are quoted at £2. 12s. 6d. per ton, gross weight, locally. Caustic, 70%, £7. 5s. to £7. 10s. per ton; 76/77%, £8. to £8. 5s. per ton. Sulphur scarce at £4. 15s. to £5. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett; do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8 to £8. 5s. and 70% £7. 5s. to £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5 0s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. per ton nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The market is steady and there is still a good demand for coal and coke. Gas coals are in strong request at 10s. 6d. to 11s. Best Northumbrian steam, 14s. to 15s. per ton; second qualities, 13s. to 14s. per ton; small steam, 7s. 6d. to 8s. per ton; bunker coals, 10s. to 11s. per ton; gas coals, 10s. 6d. to 11s. per ton; coke firm at 18s. to 21s. per ton.

New Companies.

Bell, Sons & Co., Ltd.—CAPITAL £70,000. in £1. shares (35,000 5½% cum. pref. This company has been formed to carry on the business of chemists, druggists, drysalters, oil and colourmen, importers and manufacturers of and dealers in pharmaceutical, medicinal, chemical, industrial, and other preparations. The subscribers to the

memorandum of association are :—E. Bell, 35, Slatey-road, Birkenhead, wholesale druggist ; J. R. Bell, Columbia House, Oxton, wholesale druggist ; W. D. Etherington, Oakdene, Knowsley-road, Ormskirk, clerk ; J. H. Parkinson, 33, Adelaide-road, Kensington, Liverpool, clerk ; H. Williams, 123, Bedford-street, Liverpool, clerk ; J. A. Bell, jun., Havenside, Hoylake, wholesale druggist ; J. A. Bell, Columbia House, Oxton, wholesale druggist.

Burt, Boulton, & Haywood, Ltd.—Capital £255,000. in £1 shares (30,000 pref.). This company has been formed to acquire the business carried on in England, France, Belgium, Spain, Russia, and elsewhere, as Burt, Boulton, & Haywood, and to carry on the business of timber preparers, and merchants, saw mill proprietors, tar distillers, etc. The subscribers to the memorandum of association are :—S. B. Boulton, Copped Hall, Totteridge, Herts, merchant ; T. B Haywood, Woodhatch, Reigate, merchant ; H. Boulton, 9, St. George's Square, S.W., merchant ; O. Boulton, The Limes, Hadley Wood, Middlesex, merchant ; C. B. Haywood, Woodhatch Lodge, Reigate, merchant ; T. S. Boulton, 14, Freegrove-road, Holloway, N., merchant ; F. J. Murison, 10, Avenue-road, S. Norwood Park, merchant.

George Armstrong & Co., Ltd.—Capital £20,000. in £10. shares. This company has been formed to acquire the business carried on as George Armstrong & Co., at the Cumberland Mills, Isle of Dogs, London, to adopt an agreement with E. Hyde, and to carry on the business of seed crushers, refiners, millowners, manufacturers, and merchants. The subscribers to the memorandum of association are :—D. Hyde, 51, Victoria-street, S.W., seed crusher ; Mrs A. Hyde, 51, Victoria-street, S W. ; Mrs. J. Hyde, 17, Brunswick Gardens, W. ; H. A. Des Vaeux, M.D., 8, James-street, Buckingham Gate ; F. M. Williams, Greenwich, seed crusher ; L. Williams, 8, Belmont Park, Lee ; W. Pawsey, 4, Algiers-road, Ladywell, clerk.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending August 6th.

Acetic Acid—		
Holland	30 pks.	Phillips & Graves
,,	2	T. H. Lee
,,	100	R. W. Greeff & Co.
,,	113	A. & M. Zimmermann
Acetone—		
France,	2 dms.	E. J. Catlin
Alkali—		
France,	190 c.	J. Harrison
Germany,	198	Spies Brs. & Co.
Canada,	57	J. Barber & Co
Alum—		
Germany,	100 bgs.	W. G Taylor & Co.
Ammonia—		
Holland,	£26	J. Barber & Co.
Antimony Ore—		
Holland,	18 t.	Hallett & Fry
Straits,	47	Watson's Wf.
Germany,	10	Typke & King
Arsenic—		
France,	6 cks.	J. Harrison
Germany,	£25	R. W. Greeff & Co.
,,	4	Burgoyne & Co.
France,	16 kgs.	Petri Brs.
Asbestos—		
France,	£49	Mory & Co.
Canada,	20	Deering & Robottom
,,	108	J. D. Hewitt & Co.
Barium Chloride—		
Germany,	23 cks.	Petri Brs.
Barytes—		
Germany,	39 cks.	J. L. Lyon & Co.
,,	101 pks.	W. Harrison & Co.
,,	20	Steinhoff, Sons & Co.
Holland,	62	P. Jantsen
,,	23	O'Hara & Hoar
Belgium,	41	J. L. Lyon & Co.
,,	36	O'Hara & Hoar
Bleaching Powder—		
France,	56 cks.	J. M. Steel & Co.
Bleaching Soda—		
Germany,	144 c.	H. Lambert
Caoutchouc—		
France,	8 c.	H Johnson & Sons
Straits,	1,060	E. Boustead
,,	700	H. W. Jewsbury & Co.
Portugal,	27	L. & I. D. Jt. Co.
France,	6	,,
Japan,	135	P. & O. Sn. Co.
B. Honduras	20	L. & I. D. Jt. Co.
France,	40	W. Balchin, Ld.
Zanzibar,	11	L. & I. D. Jt. Co.
,,	11	Hale & Son
Madagascar	5	Kleinwort, Sons & Co.
Straits,	105	Gilman Brs & Co.
,,	287	Anderson, Weber & Smith
E. Indies,	8	Stewart, Holl & Co.
Rangoon,	16	Prop. Hay's Wf.
France,	21	Procter Brs.
Germany,	46	Butler's Wf., Ld.
Zanzibar,	21	Major & Field
Straits,	141	L. & I. D. Jt. Co.
Castor Oil—		
Belgium,	2 pps.	R. G. Hall & Co.
	41	
,,	120	C. & E. Morton
E. Indies,	329 cks.	Cayzer, Irvine & Co.
,,	60	J. W. Cook & Co. Ld.
France,	15 pks.	F. Boehm
,,	30 brls.	Mourdant Brs
Austria,	20 cs.	M. D. Co.
Caustic Potash—		
France	8 pks.	Petri Brs.
Germany,	42	J. M. Steel & Co.
Chemicals (*otherwise undescribed*)		
France,	£145	F. C. Devon & Co.
Belgium,	36	T. Palmer
,,	30	John Cockerill Line
,,	7	W. I. Crook
,,	9	Brolenvaux & Bremmer
Holland,	80	Hernu, Peron & Co
Denmark,	98	Crosse & Blackwell
Germany,	33	Butler's Wf., Ld.
,,	50	Craven & Co.
,,	35	R. W. Greeff & Co.
France,	123	Mory & Co.
Germany,	1,003	A. & M. Zimmermann
,,	465	L. & I. D. Jt. Co.
Belgium,	100	T. H. Lee
Holland,	25	,,
U. States,	1,025	H. Harkness
France,	120	B. & F. Wf. Co
Citric Acid—		
France,	40 pks.	B. & F. Wf. Co.
Copper Sulphate—		
Germany,	18 cks.	C. Fox
Cream of Tartar—		
Italy,	10 pks.	Fellows, Morton & Co.
France,	5	M. Ashby, Ld.
,,	10	Atkins & Nisbet
,,	15	W. C. Bacon & Co.
,,	15	B. & F. Wf. Co
Dyestuffs—		
Argols		
France	48 pks.	Thames S. T. & L. Co.
Cochineal		
Canaries,	22 pks.	W. M. Smith & Sons
,,	5	Swanston & Co
Cutch		
Straits,	200 bxs.	Hoare, Wilson & Co.
,,	173 cs.	Borneo Co. Ld
Rangoon,	100 pks.	H. A. Litchfield & Co.
Divi Divi		
E. Indies,	320 bgs.	Culverwell Brooks & Co.
Extracts		
France,	4 pks.	H. Johnson & Sons
,,	100 brls.	Boutcher, Mortimore & Co.
Denmark,	2	2 cs. M. D. Co
,,	3 cks.	Bailey & Leetham Ld.
France,	10 pks.	,,
Gambier		
Japan,	1,571 pgs.	P. & O. Co.
Straits,	448 bgs.	Beresford & Co.
Indigo		
E. Indies,	40 chts.	J. W. Cook & Co.
,,	4	A. Young & Co.
,,	20	L. & I. D. Jt. Co.
,,	4	Laughland, Mackay & Co.
Myrabolams		
E. Indies,	202 bgs.	Kaltenbach & Schmitz
,,	1,028	W. Shelcott
,,	688	F. Clavdon & Co.
,,	2,042	H. J. Perlbach & Co.
,,	1,000 pckts.	Montgomerie & Workman
Naphthaline		
Germany,	27 cks.	Fleming's Oil & Chem. Co.
Shumac		
Italy,	1,500 bgs.	J. Kitchin, Ld.
,,	41	R. Waters
,,	20	T. S. Harris & Co.
,,	14	M. Rojero
,,	170 pks.	A. Slator & Co.
Tanners' Bark		
Natal,	70 t.	A. & W. Nesbitt
,,	63	Boutcher, Mortimore & Co.
,,	103	Flack, Chandler, & Co.
Valonia		
A Turkey,	25 t.	J. Graves
Farina—		
France,	5 cs.	H. Ewald & Co.
,,	6	Clarke & Cresswell
Canada,	300 pks.	R. G. Hall & Co.
U. States,	40	A. W. Latham & Co.
Glucose—		
Canada,	9,640 pks	to,140cwts. R. G. Hall & Co.
,,	100	100 M. D. Co.
Germany,	20	161 ,,
Canada,	100	600 H. Johnson & Sons
,,	1,600	1,600 E. Thompson & Co.
,,	500	500 L. Norman & Co., Ld
,,	2,400	2,400 Pearce, Pelly & Co
,,	500	500 Trier, Meyer & Co.
,,	250	250 Bennett S. S. Co., Ld.
,,	500	500 Ohlenschlager Brs.
,,	502	502 C. Mongold & Co.
,,	500	500 C. F. Webster & Co.
,,	1,100	1,100 Barret, Tagant & Co.
,,	4,500	3,500 Fellows, Morton & Co.
,,	1,000	1,000 L. & I. D. Jt. Co.
France,	400	400 L. Norman
Canada,	1,000	1,000 Beresford & Co.
,,	500	500 Bellamy's Wf. Ld.
France,	200	200 W. E. Cole
Canada	500	500 Taylor Brs.
U. States,	1,255	7,950 L & Til. L. C. & D Co.
France,	200	200 Barret, Tagant & Co.
Glue—		
Germany,	£160	E. Oliyett & Sons
Holland,	5	Union L. Co., Ld.
France	101	J. Harrison
,,	63	Mory & Co.
,,	16	Bennett S. S. Co.
,,	416	Leach & Co.
,,	130	Hernu, Peron & Co.
,,	11	Prop. Hay's Wf.
Germany,	95	L. & I. D. Jt. Co.
Norway,	300	M. D. Co.
U. States,	50	Furness, Withy & Co.
Germany,	57	J. Kitchin, Ld.
France,	70	Burnett, Brs. & Sons
Germany,	40	Phillips & Graves
Belgium,	615	J. Barber & Co.
Holland,	11	T. H. Lee
Glue Stock—		
Holland,	8 bls	Hicks, Nash, & Co.
Straits,	103 bskts.	W. France & Co., Ld.
,,	103	Deering & Robottom
Glycerine—		
France,	£480	J. W. Cook & Co.
Germany,	200	R. W. Greeff & Co.
Holland,	310	J. Barber & Co.
Infusorial Earth—		
Germany,	£12	C. Webster
,,	40	Snowdon Sons & Co., Ld.
,,	40	J. Barber & Co.
Manganese—		
Germany,	2 t.	Butler's Wf., Ld.
Mercury—		
Italy,	100 flsks.	H. Bath & Son
,,	500 btls.	L. & I. D. Jt. Co.
Methyl Alcohol—		
Germany,	8 brls.	Tingle, Jacobs & Co.
Spain,	4 dms.	Lister & Biggs
U. States,	15	H. Wallace & Co.
Mica—		
Germany,	£30	Craven & Co.
E. Indies,	2,331	W. M. Smith & Sons
Molasses—		
Germany,	570 brls.	3,348 c. J. R. Francis & Co.
Ochre—		
Holland,	14 pks.	Philipps & Graves
France,	100	72 cks. W. Harrison & Co.
Italy,	112 bgs	Robertson, Selley & Co.
France,	40 pks.	Hemingway & Co.
Spain,	50	J. L. Lyon & Co.
Belgium,	50	C. S. Lovell
Paraffin Scale—		
U. States,	570 brls.	Anglo-American Oil Co., Ld.
Pitch—		
Germany,	530 cks.	Fellows, Morton & Co.
,,	260 bgs.	Poth, Hille, & Co.
N. Russia,	500	Fellows, Morton & Co.
Holland,	19 cks.	Poth Hille & Co.
Phosphate Rock—		
U. States,	2,282 t.	Wyllie, Ward & Co.
Plumbago—		
Germany,	38 cks.	Butler's Wf., Ld.
Ceylon,	48 brls.	Phillipps & Graves
Belgium,	58	Thredder, Son & Co.
Germany,	37 cks.	B. Gallaway
,,	21	W. H. Alexander
Ceylon,	38	Thredder. Son & Co.
Germany,	45	Butler's Wf., Ld.
,,	16	J. Puddy & Co.
Ceylon,	227 brls.	Marshall & French
Potash—		
Germany,	2 cks	Butler's Wf., Ld.
,,	47	Perkins & Homer
Potashes—		
U. States,	103 c.	S. Ward & Co.
Potassium Carbonate—		
France,	60 c.	Petri Brs.
Germany,	600	J. M. Steel & Co.
,,	21 cks.	F. W. Berk & Co.,
,,	100 c.	A. & M. Zimmermann
Belgium,	112	F. Smith

Potassium Cyanide—
France, 50 cs. Prop. Hay's Wf.
" 50 Burnett Brs. & Sons
Potassium Permanganate—
Germany, 10 pks. R. W. Greeff & Co.
Potassium Sulphate—
Germany, 308 bgs. D. de Pass & Co.
Pyrites—
Spain, 1,752 t. Naylor, Benzon, & Co.
" 900 Anderson, Anderson & Co.
Salt—
Germany, 10 t. F. W. Berk & Co., Ld.
Salicylic Acid—
Germany, 26 pks. Butler's Wf., Ld.
Soap—
France £7 Mory & Co.
U. States, 24 Lunham & Moore
France, 60 Mes Parisiennes
" 100 Vokins & Co., Ld.
Soda—
France, 249 c. Burnett Brs. & Sons
Belgium, 40 Deering & Robottom
Sodium Hyposulphite—
Belgium, 14 cks. W. Slimmon
Starch—
Germany, 1,430 cs Horne & Co.
Holland, 69 pks. Phillipps & Graves
France, 260 Prprs. Dowgate Dk.
" 21 W. E. Cole
U. States, 100 300 bgs. C. Tennant, Sons, & Co.
" 600 750 R. Bennett & Co.
Holland, 1,441 460 cs. Little & Johnston
" 30 30 Hernu, Peron, & Co.
Belgium, 80 60 Leach & Co.
" 242 40 T. H. Lee
" 300 E. & T. Pink
Germany, 6 cks. Butler's Wf., Ld.
U. States, 100 pks. Beck & Pollitzer
Holland, 10 A. G. Robinson & Co.
Belgium, 220 Becker & Wagner
U. States, 56 W. Wingate & Johnston
Stearine—
France, 100 bgs. H. Hill & Sons
Belgium, 125 "
Sulphur—
Italy, 15 t. W. C. Bacon & Co.
" 5 F. Smith
" 5 J. Puddy & Co.
" 5 F. Sitzler
" 20 G. Boor & Co.
Canaries, 5 A. & W. Nesbitt
Canada, 2 L. & I. D. Jt. Co.
Italy, 10 F. C. Devon & Co.
Talc—
France, £40 Blackwell & Co.
Tar—
N. Russia, 400 brls. Dussek Brs. & Co.
" 68 Linck, Moeller, & Co.
" 2,290 W. F. Malcolm & Co.
Tartaric Acid—
Holland, 2 pks. Kirkpatrick, Barr, & Co.
Belgium, 8 B & F. Wf. Co.
Holland, 28 "
Belgium, 8 J. Harrison
Ultramarine—
Holland, 4 pks. J. Barber & Co.
Varnish—
Germany, 1 pk. Butler's Wf., Ld.
" 7 Phillipps & Graves
" 9 L. & N.-W. Rly Co.
France, 2 Bennett S. S. Co.
" 40 Suter, Hartman & Co.
U. States, 23 Pinchin, Johnston & Co.
" 1 Van Oppen & Co., Ld.
" 4 L. & I. D. Jt. Co.
White Lead—
Holland, 50 cks. J. R. Francis & Co.
" 26 J. L. Lyon & Co.
France, 16 Soundy & Sons
Belgium, 21 brls. J. L. Lyon & Co.
" 46 T. & W. Farmiloe, Ld.
Holland, 48 W. Balchin, Ld.
Germany, 51 Randall Brs.
" 26 Burrell & Co.
" 76 pks. D. Storer & Sons
Austria, 24 M. D. Co.
Wood Pulp—
Sweden, 180 pks. G. Harburg & Co.
Norway, 200 Becker & Co.
" 200 Johnsen & Jorgensen
Sweden, 520 W. E. Bott & Co.
" 320 W. G. Taylor & Co.
" 272 C. S. Lovell
" 200 J. Dards
" 260 Tough & Henderson
Norway, 240 "
Canada, 2,410 Henderson, Craig, & Co.
Sweden, 183 M. D. Co.
Zinc Oxide—
Holland, 10 cks. M. Ashby, Ld.
Germany, 200 "
U. States, 300 pks. "
Zinc White—
France, 15 pks. Flageollet & Co.

LIVERPOOL.

Week ending August 4th.

Acetic Acid—
Rotterdam, 10 balloons
Acids—
Rotterdam, 20 cs.
Aluminium—
New York, 500 bxs. T. Ashbury
Barytes—
Rotterdam { 133 pks. / 34 cks.
Antwerp, 33
Bitumen—
Alexandria, 100 cs.
Bones—
Alexandria, 176 bgs.
Gd. Canary, 192 Leventon & Co.
Boracic Acid—
Leghorn, 20 cks. Pickford & Co.
" 2
Castor Oil—
Calcutta, 481 cs. Ralli Brs.
" 300
Leghorn, 30
Colours—
Hamburg, 4 cks.
Rotterdam, 113 1 cs.
Amsterdam, 7
Stettin, 25 Evans, Sons & Co.
Cream of Tartar—
Barcelona, 5 cks. F. & L. Sitzler
" 5
Dyestuffs—
Annatto
Bordeaux, 10 cks.
Argols
Bordeaux, 5 cks.
Oporto, 24
Cochineal
Gd. Canary, 22 bgs.
Extracts
Boston, 10 brls.
Bordeaux, 32 cks.
Philadelphia, 60
Genoa, 50
Myraboiams
Bombay, 3,490 bgs.
Saffron
Valencia, 2 cs.
Shumac
Genoa, 20 cks.
Turmeric
Calcutta, 9 bgs.
Dyestuffs *(otherwise undescribed)*
Antwerp, 27 bgs.
Glucose—
New York, 1 brls. J. Glen
" 50 L. Sutro & Co.
Boston, 300 "
Glue—
Rouen, 14 cks. Co-op. W'sale
40 bgs. Society, Ld.
Antwerp, 10 bls.
Rotterdam, 200 bgs.
Stettin, 53 bskts.
Manganese Ore—
Poti, 2,250 t.
Ochre—
Marseilles, 10 cks. Birmingham Colour Co.
Paraffin Scale—
Philadelphia, 30 bls. Anglo-Am. Oil Co.
Baltimore, 200
Philadelphia, 200
Phosphates—
Antwerp, qty.
Pitch—
Archangel, 300 cks.
Potash—
Dunkirk, 28 dms.
Rouen, 51 cks. Co-op. W'sale Society, Ld.
Stettin, 19 Sachse & Klemm
Pumice Stone—
Messina, 45 bgs. 12 cs.
Pyrites—
Huelva, 1,909 t. Matheson & Co.
" 1,773 "
Rosin—
Apalachicola, Fla., 3,500 brls. T. Nickels & Sons
Salt—
Leghorn, 500 pks.
Saltpetre—
Hamburg, 23 kgs. 20 brls.
Soap—
Naples, 37 cs.
Philadelphia, 1 bx. East, Kinsay & East
" 1,232 pks.
Newport News, 671 brls.
Soapstone—
Bordeaux, 350 bgs. Geo. G. Blackwell, Sons & Co
Starch—
Boston, 20 bxs. G. Skelton & Co.
" 250 bgs. T. M. Duche & Sons
" 200
Antwerp, 120 cs.
Stearine—
Antwerp, 26 bgs.
Sulphur—
Catania, 369 bgs 100 bls. 95 brls.
Tallow—
New York, 100 hds. 139 tcs.
Boston, 275
Zarate, 160 pps.
Montreal, 503 L. M. Mark & Co.
B. Ayres, 300 Haycroft & Co.
" 491 464 cks.
Philadelphiaa, 100 tcs.
Tar—
Archangel, 5,235 brls.
Tartar—
Naples, 2 cks.
Bordeaux, 6 J. R. Francis & Co.
Tartaric Acid—
Messina, 4 cks.
Rotterdam, 2
Hamburg, 1
Wood Pulp—
Boston, 209 bls.
Rotterdam, 153
Zinc Oxide—
New York, 100 brls.

MANCHESTER.

Week ending August 6th.

Alizarine—
Rotterdam, 29 cks. 67 brls.
Ammonia—
Rotterdam, 6 cs.
Ammonium Acetate—
Rotterdam, 2 brls.
Aniline Colours—
Hamburg, 98 cks. 3 cs.
Aniline Salts—
Rotterdam, 8 cks.
Antimony Salts—
Hamburg, 3 cks.
Rotterdam, 4
Arachide Oil—
Rotterdam, 1 ck.
Barytes—
Antwerp, 90 bgs.
Rotterdam, 13 cks.
Castor Oil—
Antwerp, 54 brls.
Bordeaux, 105 cks.
Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Rotterdam, 1
Colours—
Hamburg, 3 cks.
Antwerp, 1 cs. J. T. Fletcher & Co.
" 1 brl.
Rotterdam { 47 14 cs. / 93 cks. 40 pks.
Extracts—
New York, 20 brls.
Farina—
Hamburg, 50 bgs.
Rotterdam, 40
Felspar—
Gothenburg, 1 cs.
Glucose—
New York, 200 brls.
Glue—
Antwerp, 53 bls.
Rotterdam, 4 cks. 1 cs.
Treport, 1 bx.
Naphthaline—
Antwerp, 6 bgs.
Ochre—
Rouen, 20 cks.
Rotterdam, 7 3 cs.
Leghorn, 189 bls.
Paint—
Hamburg, 40 dms.
Paraffin Scale—
New York, 993 brls.
Potash—
Hamburg, 10 cks.
Rotterdam, 12
Pumice Stone—
Palermo, 20 bgs
Pyrites—
Huelva, 1,495 t. W. H. Stott & Co
Saltpetre—
Hamburg, { 20 kgs. / 2 cks. 1 brl.
Shumac—
Palermo, 625 bls.
Soap—
Rotterdam, 4 cs.
Bordeaux, 2
Soap Lye—
Nantes, 20 cks. J. & P. Hutchison
Soda Salts—
New York, 15 cks.
Sodium Nitrate—
Rotterdam, 19 cks.
Sodium Phosphate—
Antwerp, 4 cks.
Starch—
Hamburg, 50 cks.
New York, 500 brls.
Montreal, 200 sks
Antwerp, 934 cs.
Rotterdam, 5
Sulphur—
Catania, 100 bgs.
Tallow—
New York, 150 hds.
Tannic Acid—
Hamburg, 9 cks.
Tartar Emetic—
Hamburg, 4 cks.
Tartaric Acid—
Rotterdam, 22 cks.
Tin Chloride—
Antwerp, 20 cks.
Wood Pulp—
Hamburg, 800 pks.
Bangor, Me., 46,692 bls.
Gothenburg, 4,630
Rotterdam, 50
Sarpsborg, 588
Zinc Oxide—
Rotterdam, 40 brls.
Zinc White—
Rotterdam, 10 cks.

HULL.

Week ending August 6th.

Acids—
Leghorn, 2 cks. Wilson, Sons, & Co., Ld.
Antimony—
Dunkirk, 1 ck. Wilson, Sons, & Co., Ld.
Barytes—
Bremen, 22 cks.
Amsterdam, 22 Hull & Netherlands S. S. Co.
Rotterdam, 115 "
Antwerp, 22 pks. Wilson, Sons, & Co., Ld
Castor Oil—
Genoa, 60 cs. Wilson, Sons & Co., Ld.
Chemicals *(otherwise undescribed)*
New York, 734 bgs. Wilson, Sons & Co., Ld.
" 1 dm.
Antwerp, 119 "
Hamburg, 1 cs. "
" 4
China Clay—
Hamburg, 100 cks. Bailey & Leetham, Ld.

Colours—
Danzig, 5 cks. Wilson, Sons, & Co., Ld.
Amsterdam, 2 Hutchinson & Son
Ghent, 21 Wilson, Sons, & Co., Ld.
Bremen, 6 cs. J. Pyefinch & Co.
Antwerp, 7 cks Bailey & Leetham, Ld.
Amsterdam, 1 Hull & Netherlands S. S. Co.
Rotterdam, { 59 pks. 6 cs. / 8 cks. 21 brls. ,,
Antwerp, 7 Wilson, Sons, & Co., Ld.

Cottonseed Oil—
New York, 65 brls. Wilson, Sons, & Co., Ld.

Cryolite—
Copenhagen, 1 ck. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 23 pks. Hull & Netherlands S. S. Co.
Indigo
Hamburg, 6 cs. Wilson, Sons, & Co., Ld.
Rotterdam, 5 pks. Hull & Netherlands S. S. Co.

Dyestuffs *(otherwise undescribed)*
Antwerp, 200 bgs Wilson, Sons, & Co., Ld.

Farina—
Stettin, 250 bgs. Wilson, Sons, & Co., Ld.
Konigsberg, 785 Bailey & Leetham, Ld.
Amsterdam, 100 Wilson, Sons, & Co., Ld.

Glucose—
New York 200 brls.
Stettin, 150 bgs. Wilson, Sons, & Co., Ld.

Glue—
Christiansund, 1 brl. Wilson, Sons, & Co., Ld.
Rouen, 24 cks. Rawson & Robinson
20 cs.
Bremen, 16 bgs. G. J. Glew
Antwerp, 1 ck. Bailey & Leetham, Ld.
Dunkirk, 25 Wilson, Sons, & Co., Ld.

Glue Stock—
St. Petersburg, 138 bls. Wilson, Sons, & Co., Ld.
Marseilles, 55

Limestone—
Antwerp, 2 crts. Wilson, Sons, & Co., Ld.

Ochre—
New York, 144 brls.
Rouen, 22 cks. Rawson & Robinson
Bremen, 8 Blundell, Spence, & Co.
Marseilles, 10 Wilson, Sons. & Co., Ld.
Amsterdam, 2 Hull & Netherlands S. S. Co.

Paraffin Wax—
New York, 145 pks.

Pitch—
Amsterdam, 1 ck. Hull & Netherlands S. S. Co.

Pumice Stone—
Leghorn, 3 cks.
Amsterdam, 80 bgs. Hull & Netherlands S. S Co

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 10 kgs. ,,

Soap—
Bremen, 1 cs. C. W. Dreyer
Marseilles, 6 Wilson, Sons. & Co , Ld.
Rotterdam, 2 Hull & Netherlands S. S. Co.

Soap Lye—
Marseilles, 14 dms. Wilson, Sons, & Co., Ld.

Soda—
Hamburg, 79 bgs. Wilson, Sons, & Co., Ld.
Ghent, 320 ,,

Sodium Acetate—
Rouen, 11 cks. Rawson & Robinson

Starch—
Danzig, 102 bgs.
Odessa, 100 Wilson, Sons, & Co., Ld
Ghent, 370 cs. ,,
Bremen, 1,313 Veltmann & Co.
Rotterdam, 40 Hull & Netherlands S. S. Co.
Antwerp, 68 Bailey & Leetham, Ld.

Tallow—
New York, 95 tcs. Wilson, Sons, & Co., Ld.
Hamburg, 110 cks. ,,
Dunkirk, 202 ,,

Tartaric Acid—
Rotterdam, 10 cs. Hull & Netherlands S. S. Co.

Turpentine—
Hamburg, 1 brl. Wilson, Sons, & Co., Ld.

Ultramarine—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

White Lead—
Amsterdam, 11 cks. Hutchinson & Son
Antwerp, 36 Bailey & Leetham. Ld.
Rotterdam, 97 Hull & Netherlands S. S. Co.
Amsterdam, 30 ,,

Wood Pulp—
Gothenburg, 103 pks. Wilson, Sons, & Co., Ld.
Drontheim, 970 bls. ,,
Christiania, 678 ,,
Abo, 299 J. Good & Sons
,, 10
Rotterdam, 6 pks. Hull & Netherlands S. S. Co.

Zinc White—
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending August 11th.

Albumen—
Ghent, 6 cs.

Alumina Sulphate—
Rotterdam, 200 bgs. J. Rankine & Son

Barium Chloride—
Rotterdam, 6 cks.

Barium Sulphate—
Antwerp, 400 bgs.

Barytes—
Rotterdam, 114 pks. J. Rankine & Son

Bleaching Powder—
Rotterdam, 60 cks. J. Rankine & Son

Castor Oil—
Fiume, 10 cs.
Antwerp, 140 cks.

Colours—
Rotterdam, 5 bxs. 32 brls.
Rotterdam, 99 pks. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 97 cks. 22 brls.
Aniline
Amsterdam, 1 ck. J. Rankine & Son

Aniline Colours
Hamburg, 1 cs.
Argols
Bordeaux, 30 bgs.
Extracts
New York, 1 brl.
Fiumé, 254 brls.
Antwerp, 1 cks.
Shumac
Palermo, 420 bgs.

French Chalk—
Fiume, 100 bgs. P. M'Intosh

Glue—
Rotterdam, 40 bgs.
Boston, 10 kgs. 5 brls.
Rotterdam, 24 bgs. J. Rankine & Son
Fiume, 200

Infusorial Earth—
Hamburg, 76 bgs.

Ochre—
Rotterdam, 5 cks.

Oxalic Acid—
Rotterdam, 5 cks. J. Rankine & Son

Plumbago—
Genoa, 80 bgs.

Potash—
Rotterdam, 45 cks. J. Rankine & Son

Soap—
New York, 95 brls.
Fiume, 176 cs.

Starch—
Boston, 200 sks.
Rotterdam, 64 cs. J. Rankine & Son
Antwerp, 2 bgs. 110 cs.

Stearine—
Amsterdam, 63 bgs.

Sulphur—
Catania, 906 bgs. 220 brls.

Tallow—
Rotterdam, 15 tcs. J. Rankine & Son
New York, 50

Tartar—
Bordeaux, 14 cks.
Hamburg, 20

Tartaric Acid—
Antwerp, 12 cks.

Ultramarine—
Rotterdam, 2 cks. J. Rankine & Son

Waste Salt—
Hamburg, qty.

White Lead—
Rotterdam, 50 cks.
,, 69 pks. J. Rankine & Son

Wood Pulp—
Gothenburg, 97 bls.
Gefle, 50 A. & A. Y. Mackay
Ikutskar, 2,400 ,,
Drontheim, 760
Boston, 180
Christiana, 4,311

Zinc Sulphate—
Rotterdam, 5 brls. J. Rankine & Son

TYNE.

Week ending August 6th.

Aniline Colours—
Rotterdam, 2 brls. Tyne S. S. Co.

Antimony—
Hamburg, 402 cs. Tyne S. S. Co.

Barytes—
Rotterdam, 250 bgs. Tyne S.
60 cks. S. Co.
Antwerp, 500 bgs. ,,

Colours—
Hamburg, 2 cs. Tyne S.
12 cks. S. Co.
Antwerp, 4 ,,

Limestone—
Antwerp, 7 cs. Tyne S. S. Co.

Phosphates—
Fernandina, 1,815 t.

Pitch—
Antwerp, 2 brls. Tyne S. S. Co.

Saltpetre—
Harburg, 298 t. Clephans & Wiencke

White Lead—
Rotterdam, 10 cks. Tyne S. S. Co.

Wood Pulp—
Gothenburg, 55 bdls.
Christiania, 1,000 bls. P. H. Matthiesen & Co.

GOOLE.

Week ending August 3rd.

Alizarine—
Rotterdam, 16 cks.

Alkali—
Calais, 14 cks.

Alum—
Rotterdam, 12 cks.

Barytes—
Rotterdam, 50 bgs.
Antwerp, 50 cks.

Carbolic Acid—
Hamburg, 5 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 6 cks. 1 cs.

Dyestuffs *(otherwise undescribed)*
Rotterdam, 447 cks. 71 cs. 1 pk.
Boulogne, 115 79
Antwerp, 745 bgs.
Hamburg, 1 967 pcs.

Farina—
Amsterdam, 200 bgs.
Delfszyhl, 100

Glue—
Hamburg, 10 cks.

Indigo—
Rotterdam, 3 cks.

Lead Acetate—
Hamburg, 12 cks.

Logwood—
Antwerp, 20 t.

Madder—
Rotterdam, 3 cks.

Potash—
Dunkirk, 27 cks. 30 dms.
Calais, 8

Pyrites—
Seville, 1,210 t.

Saltpetre—
Rotterdam, 100 bgs.

Tartar—
Rotterdam, 1 ck.

Waste Salt—
Hamburg, 673 cks.

Wood Pulp—
Rotterdam, 54 bls.

GRIMSBY.

Week ending August 6th.

Albumen—
Hamburg, 2 cks.

Caoutchouc—
Rotterdam, 1 cs.

Colours—
Hamburg, 18 cks. 13 pks.
Antwerp, 4 66
Rotterdam, 50

Plumbago—
Hamburg, 5 cks.

Starch—
Antwerp, 134 cs.

Wood Pulp—
Malmo, 80 bls.

Zinc Ashes—
Antwerp, 3 cks.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 10th.

Acids—
Townsville, 260 cs. £36

Alkali—
Melbourne, 5 c £14
Sydney, 4 t. 13 36

Ammonia—
Durban, 2 cs. £13

Anhydrous Ammonia—
St. Petersburg, 1 t. 5 c. £75
Antwerp, 50 cylndrs. 170

Ammonium Carbonate—
Cologne, 1 t. 19 c. £50
Paris, 1 10 42

Ammonium Chloride—
Salonica, 2 t. 6 c. £68
Constantinople, 2 4 70

Ammonium Sulphate—
Mauritius, 125 t. 3 c. £1,195
Bremen, 115 1,063
Arsenic—
Wellington, 15 dms. £16
Carbonic Acid Gas—
Channel Is., 75 tubes £28
Caustic Soda—
Vera Cruz, 4 t. 10 c. £36
Lyttelton, 6 17 50
Auckland, 10 5 94
Philadelphia, 69 3 400
Chemicals *(otherwise undescribed)*
Pt. Elizabeth, 525 pks. £79
B. Ayres, 5 29
Sourabaya, 7 52
Delagoa Bay, 53 cs. 542
E. London, 90 pks. 123
Bombay, 14 cks. 16
Rotterdam, 5 15 kgs. 175
Cologne, 15 18 130
Hamburg, 24 36 414
Lisbon, 3 cs. 58
Calcutta, 2 1,250 sls. 122
Perth, 34 pks. 31
Shanghai, 3 10
Auckland, 62 73
Barranquilla, 5 cs. 22
Genoa, 20 115
Brussels, 4 10 93
Bremen 40 153
Demerara, 125 pks. 33
Las Palmas, 210 bgs. 89
Toronto, 3 22
Sydney, 7 cs. 50
Wellington, 28 pks. 31
Citric Acid—
Bombay, 3 c. £16
Dunedin, 2 14
Rotterdam, 1 7
Libau, 1 ck. 15 kgs. 132
Oporto, 6 pks. 19
St. Petersburg, 4 135
Melbourne, 20 113
Amsterdam, 10 c. 55
Adelaide, 5 28
Sydney, 10 57
Hamburg, 1 ck. 33
Coal Products—
Alizarine
Lyttelton, 11 cs. £217
Wellington, 6 cks. 1 151
Anthracene
Cologne 360 cks. £702
Dusseldorf, 183 780
Rotterdam, 310 910
Benzol
Boulogne, 50 cks. £118
Treport, 78 214
Antwerp, 12 68
Carbolic Acid
Hamilton, 5 cks. £31
Melbourne, 7 27
Sydney, 1 20 dms. 13
Boston, 20 112
Dusseldorf, 80 601
Creosote
Dieppe 46,270 gls. £242
Naphthaline
Rotterdam, 100 bgs. 10 cs. £65
Dusseldorf, 500 244
Pitch
Hochfeld, 145 t. £193
Batoum, 1,968 cks. 680
Rangoon, 15 9
Antwerp, 198 t. 240
Mauritius, 10 pks. 7
Pyridine
Cologne, 21 brls. £245
Tar
Calcutta, 20 cks. £15
Mossel Bay, 70 dms. 11
Lisbon, 12 brls. 10
Amsterdam, 150 runlts. 95
Melbourne, 20 12
Durban, 300 18
Copper Sulphate—
Bordeaux, 10 t. £166
Constantinople, 5 80
Rosario, 2 46
Cream of Tartar—
Napier, 12 c. £46
Adelaide, 1 t. 5 91
Dunedin, 1 73
Sydney, 1 73
Wellington, 4 15
Disinfectants—
Brisbane, 27 pks. £49
Amsterdam, 1 cs. 6
Cape Town, 13 34
Demerara, 15 cks. 17
Manure—
Palermo, 1 t. 3 c. £15
Jamaica, 5 44
Granville, 100 50
Libau, 700 5 1,557
Gothenburg, 49 5 135
Singapore, 24 192
Penang, 419 2,552
Boston, 1 16
Nitric Acid—
Channel Is., 28 carbys £42
Phosphorus—
Wellington, 4 c. £35
Potash—
Wellington, 1 t. 8 c. £45
Potassium Bichromate—
Konigsberg, 8 c. £15
Antwerp, 6 t. 13 215
Potassium Chlorate—
Lisbon, 5 c. £7
Potassium Cyanide—
Durban, 8 t. 3 c. £706
Delagoa Bay, 5 20 cs. 633
Townsville, 13 50 10 c. 2,048
Melbourne, 5 482
Adelaide, 10 cs. 117
Tampico, 200 1,172
Los Angelos, 200 1 078
Las Paz, 200 1,222
Potassium Prussiate—
Genoa 2 t. 14 c. £145
Rotterdam, 10 cks. 176
Saltpetre—
Wellington, 8 cks. £20
M. Video, 1 t. 13 c 33
Lyttelton, 10 10
Sheep Dip—
Pt. Elizabeth, 40 dms. £27
San Francisco, 11 t. 17 c. 375
B. Ayres, 1,750 cs. 3,563
Adelaide, 200 375
Auckland, 250 438
Bahia Blanca, 750 1,688
Soda—
Montreal, 16 c. £42
Soda Ash—
Lyttelton, 7 t. 2 c. £30
Sodium Acetate—
Dunedin, 3 t. 2 c. £41
Sodium Bicarbonate—
Dunedin, 2 t. £14
Sodium Carbonate—
Pt. Elizabeth, 10 c. £6
Sodium Prussiate—
Cologne, 2 t. £100
Hamburg, 5 569
Sodium Silicate—
Vera Cruz, 2 t. £7
Sulphur—
Napier, 1 t. £8
Sulphuric Acid—
Batavia 40 pks. £39
Trincomalee, 10 cs. 10
Superphosphates—
Mauritius, 200 t. £620
Pt. Chalmers, 200 560
Libau, 300 2 c. 705
Tartaric Acid—
Napier, 1 c. £6
Adelaide, 5 31
Montreal, 1 t. 115
Brisbane, 1 3 128
Sydney, 1 8 236
Melbourne, 10 kgs. 56
Wellington, 7 41

LIVERPOOL.

Week ending August 10th.

Acetic Acid—
Lisbon, 5 cks. £12
Alkali—
Victoria, B.C. 10 t. 1 c. 3 q. 40
San Sebastian, 10 40
Alicante, 11 19 1 48
Rotterdam, 6 6 25
Montreal, 15 6 85
Rio de Janeiro, 3 3 2 13
Sfax, 4 4 3 17
Piræus, 18 2 4
Galatz, 1 1 1 5
B Ayres, 11 13 2 45
Brisbane, 2 1 11
Adelaide, 15 17 65
Mauritius, 1 11 1 6
Oporto, 7 16 2 32
Alum—
Casabalanca, 1 t. 6 c. 2 q. £6
Sydney, 1 5
Rangoon, 1 10 8
Sao Paul, 1 5
Melbourne, 1 7 7
Brisbane, 1 2 2 6
Symrna, 17 19 1 96
Aluminous Cake—
Calcutta, 50 t. 11 c. £116
Ammonia—
Teneriffe, 6 c. £8
Vera Cruz, 18 28
Anhydrous Ammonia—
Gibraltar, 15 c. £27
Las Palmas, 10 t. 90
Ammonium Carbonate—
Seville, 1 t. 1 q. £26
Hiogo, 2 14 c. 81
Hamburg, 2 13 87
Fairwater, 1 5 35
Genoa, 1 2 27
Amsterdam, 1 ck.
Rotterdam, 8 kgs.
Ammonium Chloride—
Alexandretta, 1 t. 1 c. 1 q. £35
Genoa, 1 3 11
Fiume, 1
Galatz, 10 16
Rosario, 5 7
Madras, 7 9
Danzig, 2 10 43
Smyrna, 8 3 15
Rotterdam, 5 13 1 84
Gothenburg, 6 3 11
Larnaca, 4 6
Ammonium Sulphate—
Toronto, 5 t. £48
Honfleur, 752 1 c. 2 q. 2,268
Bordeaux, 26 8 3 217
Nantes, 10 88
Gd. Canary, 28 12 286
Cartagena, 10 3 1 86
Genoa, 25 5 231
Las Palmas, 7 67
Madeira, 10 95
Oporto, 20 2 1 210
Samarang, 140 14 3 1,050
Basic Slag—
Barbadoes, 25 t. £65
Bleaching Powder—
Alicante, 30 cks.
Bombay, 66 cs.
Boston, 316
Calcutta, 110
Detroit, 46
E. St. Louis, 21 30
Genoa, 30
Lisbon, 31
Montreal, 17
Naples 15
Newport News, 211
New York, 319 70 brls.
Philadelphia, 299
Rio de Janeiro, 18
Venice, 48
Vera Cruz, 60
Borax—
Fiume, 2 t. 10 c. £32
Genoa, 1 14
Melbourne, 1 14
Sydney, 3 50
Vancouver, 1 5
Antwerp, 11 145
Galatz, 10 kgs. 6
Rotterdam, 12 t. 4 2 q. 176
E London, 3 2 3 42
Hamburg, 5 75
Wellington, N.Z. 4 4
Montreal, 7 10 96
Calcium Chloride—
Boston, 21 t. 15 c. £49
Quebec, 15 33
New York, 15 5 30
Melbourne, 4 18 11
Sydney, 10 3 23
Odessa, 20 3 43
Brisbane, 5 2 11
Carbolic Acid—
Forcodos, 1 c. £7
Yokohama, 6 t 1 307
Rotterdam, 5 3 112
Halifax, 8 3 q. 11
Montreal, 1 1 70
Newport News, 9 73 615
Dunedin, 2 10 3 64
Napier, 4 12 3 75
Venice, 10 36
Baltimore, 9 15 3 652
Rouen, 5 317
Caustic Potash—
Newport News, 25 t. 5 c. £680
Caustic Soda—
Acopulco, 40 cs
Alexandria, 200 dms.
Algoa Bay, 20
Alicante, 100
Bahia, 20
Barcelona, 276 110 pks.
Bombay, 41
Boston, 300
Caceres, 30
Cartegena, 50
Catania, 15
Chicago, 50
Christiana, 5
Constantinople, 10
Corinto, 50
Corunna, 20 cks.
Darlington, 50
Don Station, 100
E. St. Louis 15 cs. 15 brls.
Fairwater, 60
Fiume, 90
Fremantle, 96 pks.
Galatz, 40
Gefle, 27 brls.
Genoa, 398
Hamburg, 175
Hiogo, 200
Konigsberg, 35
Leghorn, 17
Libau, 32
Malaga, 78
Marseilles, 5
Melbourne, 73
M. Video, 50
Montreal, 5
Nantes, 90
Naples, 30
Newfairwater 85
New York, 103
New Toronto, 35
Norkopping, 12
Oporto, 60
Para, 43 3 cks.
Pernambuco, 141
Piræus, 20
Pt. Credit, 35
Pt. Said, 6
Progresso, 50
Providence, 10
Rangoon, 37
Rio de Janeiro, 30
Rio G. do Sul, 60
Rotterdam, 64
Rouen, 8
Salaverry, 12
Samarang, 8
Santos, 30
Seville, 500
Sevilla, 11
Sourabaya, 30
Suakim, 60 pks.
Sydney, 15
Stettin, 53
Tampico, 291
Toronto, 10
Trieste, 63
Valencia, 35
Vera Cruz, 113
Victoria 25
Wellington, 25
Winnipeg, 35
Yokohama, 50
Chemicals *(otherwise undescribed)*
Casablanca, 2 c. 3 q. £9
Calcutta, 56 t. 10 1 137
Melbourne, 4 10 2 49
Singapore, 5 7
Fremantle, 1 14
Brisbane, 2 28
Sydney, 1 10 43
Odessa, 7 170
Delagoa Bay, 20 brls. 28
Rotterdam, 5 3 77
Rosario, 2 9 38
B. Ayres, 2 9 38
Montreal, 4 114
Philadelphia, 13 4 382
Genoa, 19 3 q. 31
China Clay—
Baltimore, 50 t.
Bombay, 25 120 cks.
Boston, 2,450
Calcutta, 480
Hamburg, 20
Montreal, 140
Norkopping, 60
Pernambuco, 40
Philadelphia, 339 bgs 832
Rio de Janeiro, 25
Rouen, 50
Citric Acid—
Melbourne, 1 c. £7
Coal Products—
Aniline Oil
Boston, 5 dms.
Philadelphia, 30
Aniline Salts
Boston, 14 cs.
New York, 29
Smyrna, 7 bbls.

Binitro Toluol
New York 5 cks.
Tar
Bata, 2 brls.
Bordeaux, 100 c.s.
St. John's, 20
Copperas—
Calcutta, 27 t. 10 c. £54
Copper Sulphate—
Wellington, 10 c. £8
Palermo, 7 t. 1 q. 112
Galatz, 4 4
Gothenburg, 11 9
Stettin, 8 1 130
Landskrona, 2 7 1 40
Rouen, 12 16 3 366
Bordeaux, 6 5 90
Copenhagen, 1 16
Porto Alegre, 2 9 39
Rouen, 10 3 160
Cream of Tartar—
Victoria, B.C. 4 c. 3 q. £12
Disinfectants—
Karachi, 1 t. 6 c. £8
Halifax, 19 1 q. 33
Akassa, 4 3 8
Dyestuffs—
Aniline Colours
Boston, 7 cks
New York, 9 5 kgs.
Philadelphia, 1
Extracts
Genoa, 30 cks.
New York, 20
Indigo
New York, 3 cks.
Glycerine—
Sydney, 9 c. 2 q. £30
Montreal 31 t. 18 1 191
Rotterdam, 9 18 1 310
Calcutta, 20 cs. 158
Vancouver, 1 5 c. 38
Magnesia—
Lisbon, 1 cs.
New York, 10
Vera Cruz, 6
Magnesium Chloride—
Rouen, 15 t. 7 c. £41
Manure—
Bordeaux, 11 t. 12 c. 1 q. £100
Gd. Canary, 12 78
Oxalic Acid—
Boston, 6 t. 19 c. 2 q. £175
Paint—
Alexandria, 184 kgs.
Beyrout, 177
B. Ayres, 230 15 cks.
Cape Town, 20 dms.
Constantinople, 160 3
Forcados 15
Newcastle, 23
Old Calabar, 25 5 cs.
Opobo, 20
Para, 4 cks.
Pt. Said, 8
Rosario, 40
Rotterdam, 2 32
St. John's, 2
Savanilla, 15 cs.
Talcahuano, 26
Valparaiso, 118
Vera Cruz, 83 pks.
Painters' Colours—
Antwerp, 173 pks.
Baltimore, 40 kgs. 105 brls.
Bluefields, 70
Bombay, 4 1,005
Cayenne, 2
E. London, 31 cs.
Iquitos, 2 2
Lisbon, 43
M. Video, 31 10 cks. 44 cts.
New York, 2 cks. 6 pks.
Para, 1 cs 15 kgs. 17 brls.
Paris, 1
Rio de Janeiro, 20 7
Rosario, 17 cks. 2
Rotterdam 3 cs.
Tampico, 5
Paraffin Wax—
Genoa, 175 bgs.
Lisbon, 10
New York, 2 cs.
Trieste, 50
Venice, 50
Vera Cruz, 20
Phosphates—
Hamburg, 50 t. £125
Potash—
B. Ayres, 8 c. 2 q. £5
Potashes—
B. Ayres, 2 t. 4 c. £51
Potash Salts—
Guayamas, 8 t. 2 c. 2 q. £756
Mexico City, 5 350
Potassium Carbonate—
New York, 10 t. 18 c. £220
Potassium Chlorate—
Hamburg, 10 c. £16
Malta, 3 5
Libau, 2 t. 10 75
Stettin, 1 30
Copenhagen, 6 10 195
Newfairwater, 10 15
Gamlakarleby, 19 31
Odessa, 10 300
Hiogo, 20 500
Melbourne, 2 60
Stockholm, 4 18 141
Konigsberg, 1 10 46
Rotterdam, 19 30
Amsterdam, 10 15
Bari, 2 £60
Genoa, 10 15
Randers, 1 30
Potassium Prussiate—
Genoa, 19 c. 2 q. £50
Potassium Stannate—
Bombay, 1 t. 10 c. 3 q. £87
Salt—
Antwerp, 175 t.
Baltimore, 200 4 c.
Barbadoes, 50 10 cs.
Benin, 15
B. Ayres, 37
Brutu, 121
Calcutta, 1,374
Camercons, 137 5
Copenhagen, 460
Degama, 48 18
Dunedin, 75
E. London, 7 9
Futa, 15 12
Gefle, 49
Ghent, 100
Halifax, 1,200 bgs.
Iceland, 60
Lagos, 163 10
Matadi, 35
Melbourne, 174 19
Miramichi, 193
Montego Bay, 100 cs.
Montreal, 1,063
Newcastle, 50
N. Orleans, 150
New York, 760 sks.
Noki, 900
Old Calabar, 2,250
Pt. Natal, 201
Quebec, 1,202
Rangoon, 708
Rio del Rey, 1,120
Rosario, 50
Rotterdam, 362
Salt Pond, 500 bgs.
San Nicolas, 300
Sierra Leone, 4,000 sks.
Stockholm, 2,418
Sydney, 146 1,100 bgs.
Ukaka, 500
Tybre, 300
Vancouver, 2,830 sks.
Wellington, 430 200
Salt Cake—
Antwerp, 260 t. £313
Delagoa Bay, 5 5 c. 13
Baltimore, 50 4 81
Saltpetre—
Baltimore, 54 t. £1,350
M. Video, 5 c. 2 q. 6
Bahia, 1 1 27
Parnahyba, 1 21
Sheep Dip—
Bombay, 5 cks. 200 dms. £50
Bahia Blanca, 1,500 398
M. Video, 470 144
B. Ayres, 35 t. 2 c. 2 q. 632
Cape Town, 16 3 13
E. London, 5 5 2 72
Pt. Natal, 4 13 3 65
Sydney, 4 3 8
Barranquilla, 5 2 11
Valparaiso, 10 cks. 10 cs. 25 dms. 97
Talcahuano, 10 10 25 97
Soap—
Akassa. 79 cs.
Algoa Bay, 520 bxs. 2
Antwerp, 105
Auckland, 55
Axim, 1
Batavia, 850
Belize, 1,000
Bermuda, 1
Bombay, 205 56
Bonny, 2
Boston, 10 brls.
Brussels, 160
Cameroons, 500
C. C. Castle, 40
Cape Town, 1,250
Christchurch, 450
Colombo, 10
Constantinople, 200 40 dms.
Copenhagen, 40
Curacao, 100
Delagoa Bay, 1,795
Demerara, 320
Dunedin, 650
Durban, 175
E. London, 650 41
Fremantle, 1,700
Genoa, 115
Gibraltar, 71 20
Hong Kong, 50
Iquitos, 200
Johannesburg, 40
Kurrachee, 525
Ladysmith, 50
Las Palmas, 106
Limassol, 22
Lucea, 125
Maceio, 15 kgs.
Madras, 39
Malta, 70
Manaos, 550
Matadi, 300
Mauritius, 502
Montreal, 400
Napier, 225
Natal, 200
New York, 9 cks.
Odessa, 20
Old Calabar, 74
Para, 400 4
Parnahyba, 20
Piræus, 2 bdls.
Pt. Elizabeth, 502
Pt. Natal, 785
Pram Pram, 20
Pretoria, 730 23
Principulca, 40
Puerto Cortez, 25
Punta Arenas, 10
Rangoon, 250 45 4 pks. 9 crts.
Rio G. Do Sul, 2
Rio Hacha, 500
Rotterdam, 323
St. John's, 421
St. John's, N.B., 370
St. John's, N'fd., 2
St. Lucia, 134
St. Thomas, 680
Salonica, 50
Salt Pond, 150
Sandy Point, 1
San Francisco, 1 ck.
Shanghai, 4,697
Smyrna, 6
Sourabaya, 500
Stockholm, 205
Surinam, 50
Sydney, 4,020
Tangiers, 20
Tientsin, 100
Toronto, 500
Trinidad, 100
Valparaiso, 133 80 8 dms.
Vancouver,
Victoria, 1,011
Wellington, 750
Winnipeg, 300
Yokohama, 2
Zanzibar, 250 bdls.
Soap Lye—
New York, 230 dms.
Rotterdam, 180
Soda—
Madeira, 5 dms.
Soda Ash—
Antwerp, 16 cks.
Batavia, 25 brls.
Bombay, 5
Boston, 273 pks.
Calcutta, 50 kgs. 153 cks.
Chefoo, 50
Copenhagen, 100 bgs.
Genoa, 500 44
Gothenburg,
Hamburg, 500
Helsingborg, 100
Hiogo, 50
Kotka. 348
Maranham, 90
N. Orleans, 35
New York, 160 120
Oporto, 22
Philadelphia, 400 105 tcs.
Piræus, 100 brls.
Puerto Cabello, 8
Rio de Janeiro, 20
Santos, 15
Sao Paulo, 20
Singapore, 5
Shanghai, 12 sks.
Smyrna, 100
Stockholm, 28
Sydney, 266
Syra, 153 brls.
Venice, 20 37
Vera Cruz, 50
Soda Crystals—
Bombay, 100 kgs.
Constantinople, 140 brls.
Dedeagatch, 25
Don Station, 150
Fremantle, 120
Gibraltar, 60 cks.
Kingston, 100
Leghorn, 99
Limassol, 40
Malta, 58
Nagasaki, 10
New York, 56 140
Philadelphia, 224
Sydney, 168
Toronto, 100 250 bgs. 50
Sodium Bicarbonate—
Alexandria, 20 kgs.
Barbadoes, 4 cs.
Barcelona, 75
Batavia, 10 cks.
Calcutta, 5 / 1,500 kgs.
Constantinople, 30
Fiume, 40
Fremantle, 230 cks.
Genoa, 69 / 80 kgs.
Halifax, 100
Hamburg, 10 cks.
Hiogo, 400 kgs.
Ibrail, 34
Kingston, 100
Libau, 72
Lisbon, 30
Malta, 35
Montreal, 50 bgs.
Naples, 85 / 5 cks.
Newcastle, 100 kgs.
Odessa, 240
Palermo, 20
Para, 10 10 brls.
Penang, 5 cks.
Perth, 20 kgs.
Piræus, 19 cks.
Pt. Elizabeth, 10
Pt. Natal, 46 kgs.
Rotterdam, 45
Salonica, 65
Santander, 42 / 2 cks.
Sevilla, 200
Seville, 4 / 140 kgs.
Singapore, 4 cks.
Smyrna, 13 kgs.
Stettin, 50
Sydney, 360
Toronto, 25
Tunis, 25
Vancouver, 50
Varna, 60
Valencia, 150 / 6 cks.
Sodium Bichromate—
Magog, 6 cks.
Sodium Carbonate—
New York, 56 brls.
Rotterdam, 50
Sodium Chlorate—
Antwerp, 10 kgs.
Boston, 300
Hamburg, 4 cks.
Sodium Hyposulphite—
Genoa, 20 cks.
Sodium Sulphate—
Montreal, 20 cks. 20 brls.
Sulphur—
Boston, 125 t. 5 c. £533
Sulphuric Acid—
Pernambuco, 17 c. £12
Manaos, 1 t. 8
Superphosphates—
Houfleur, 382 t. 17 c. 2 q. £710
Stettin, 2,150 4 614
Tartaric Acid—
M. Video, 2 c. £12
Tin Crystals—
Boston, 2 t. £93
Varnish—
Antwerp, 14 cks.
Genoa, 6
Singapore, 5 cs.
Smyrna, 1
Uruguayna, 2 dms.

White Lead—
Alexandria, 150 kgs.
Sourabaya, 150
B. Ayres, 8 cks.
Zinc Chloride—
Montreal, 3 t. £43

MANCHESTER.

Week ending August 10th.

Aniline Colours—
Germany, 4 cks. 2 cs. 9 kgs.
France, 1
Aniline Salts—
Germany, 15 puns.
France, 2 brls.
Beta-Naphthol—
Belgium, 2 brls.
Carbolic Acid—
France, 124 btls.
Chemicals (*otherwise undescribed*)
Antwerp, 12 kgs.
Rotterdam, 6 cks.
Extracts—
France, 8 cks.
Gamma Acid—
Belgium, 1 ck.
Glue—
Belgium, 10 cks.
Bombay, 7
Germany, 22
Holland, 12
Naphthol—
Belgium, 15 cks.
Paraffin Wax—
Holland, 1 cs.
Paranitraniline—
Belgium, 2 kgs.
Soap—
Copenhagen, 1 cs.
Sulphur—
Montreal, 668 bgs.
Toluol—
Germany, 15 dms.

HULL.

Week ending August 6th.

Alkali—
Abo, 12 cks.
Stettin, 15
Trieste, 8
Ammonium Sulphate—
Bombay, 200 bgs.
Odessa, 33 brls.
Palermo, 300
Rouen, 101
Stettin, 890
Venice, 800
Basic Slag—
Aarhuus, 1,116 t.
Colberg, 750
Chemicals (*otherwise undescribed*)
Amsterdam, 51 cks.
Antwerp, 2
Bombay, 717 40 pks.
Bari, 20 cs.
Christiania, 27 5
Copenhagen, 5 6
Danzig, 21 47 kgs. 12
Drontheim, 2 brls.
Gothenburg, 1 8 cs.
Hamburg, 2 49
Rotterdam, 1 80
Stettin, 36 4 pks.
Cottonseed Oil—
Amsterdam, 670 c.
Antwerp, 627
Danzig, 84
Drontheim, 35
Dunkirk, 101
Ghent, 103
Hamburg, 644
Konigsberg, 102
Rotterdam, 453
Rouen, 42
Stettin, 100
Stockholm, 33
Trieste, 103
Creosote—
Stettin, 10 brls.
Dyestuffs (*otherwise undescribed*)
Gothenburg, 1 ck. 1 cs.
Glue—
New York, 21 cks.
Linseed Oil—
Amsterdam, 141 c.
Antwerp, 49
Bombay, 640
Christiania, 513
Copenhagen, 57
Constantinople, 35
Christiansund, 34
Drontheim, 104
Kurrachee, 20
Rotterdam, 101
Trieste, 23
Venice, 90
Paint—
Gothenburg, 5 dms.
Painters' Colours—
Abo, 200 cks.
Amsterdam, 10 1 cs. 32 dms.
Antwerp, 22 11 1 pkg.
Bombay, 42
Christiania, 15 12 dms.
Copenhagen, 39 3 1
Danzig, 11
Drontheim, 1
Ghent, 12
Gothenburg, 30 2 17
Hamburg, 22
Kurrachee, 32
New York 45
Rotterdam, 8 1
St. Petersburg, 19 1
Stettin, 29
Stockholm, 35 58
Stavanger, 2
Trieste, 20
Venice, 5
Wasa, 50
Pitch—
Antwerp, 85 t.
Slag Meal—
Libau, 778 bgs.
Soap—
Amsterdam, 15 cs.
Drontheim, 50
Gothenburg, 1
Odessa, 1
Stearine—
Trieste, 29 cks.
Tallow—
Bombay, 12 cks.
Tar—
Amsterdam, 9 cks.
Antwerp, 6
Hamburg, 7
Varnish—
Amsterdam, 2 cs.
Antwerp, 1
Bombay, 5 135 dms.
Danzig, 1 ck.
Ghent, 7
Hamburg, 2
Kurrachee, 4
Palermo, 1
Stockholm, 1 1

GLASGOW.

Week ending August 11th.

Ammonia—
Barbadoes, 15¾ t.
Ammonium Sulphate—
Barbadoes, 50 t. 17¾ c.
Demerara, 25 4½
Trinidad, 70 6½
Hamburg, 10 4
Coal Products—
Benzine
France, £510 10s.
Creosote
France, £366
Creosote Oil
Christiania, £15
Russia, 287
France, 439
New York 75
Pitch
Bombay, £15
Geffe, 5 t.
Canada, 149
Portugal, 256
Honghay, 1,801
Tar
Christiania, £2
Karachi, 138
Rangoon, £92 10s.
Russia, 150
Copperas—
Bombay, 8 t. 13 c.
Cottonseed Oil—
Demerara, 1 t. 8¾ c.
Dextrine—
Canada, £52
Dried Blood—
Rouen 29 t. 14¾ c.
Dyestuffs (*otherwise undescribed*)
S. Australia, £22
Extracts—
Canada, £22
Malaunay, 67
Glue—
Rangoon, £41
Lead Nitrate—
Canada, £94
Linseed Oil—
Demerara, 1 t. 11¼ c.
Kingston, 5 14
Canada, 18 t. 11½
Mauritius, 16¾
Melbourne, 12½
Logwood—
Oporto, £42
Paint—
Demerara, £61
Brisbane, 59
Maryborough, 25
Painters' Colours—
Demerara, £20
Rotterdam, 17
Rangoon, £57 12s.
Calcutta, £390
Mauritius, 40
U.S A., 200
Paraffin Wax—
Rouen, £32 15s.
Rotterdam, 10 t.
Potassium Bichromate—
Rouen, £76
Turkey, 231
Rotterdam, 72
Potassium Cyanide—
Melbourne, £348
Sydney, 130
Rosin Oil—
Amsterdam, £50
Sheep Dip—
B. Ayres, £67
Soap—
Bombay, 2 t. 19 c.
Sodium Bichromate—
Rouen, 10 c.
Starch—
Rotterdam, £13
Sulphuric Acid—
Rangoon, £280
Calcutta, 35
Tallow—
Oporto, 20¾ c.
Rotterdam, 154
Varnish—
Pavages, £34
Christiania, £4 10s.
White Lead—
Demerara, £21
Sydney, N.S.W., 71

TYNE.

Week ending August 6th.

Alkali—
Amsterdam, 7 t. 13 c
Rotterdam, 7 14
Hamburg. 3
Gothenburg. 5 9
Alumina Sulphate—
Stockholm, 14 t. 13 c.
Ammonium Chloride—
Stockholm, 1 t. 1 c.
Ammonium Sulphate—
Antwerp, 20 t.
Barium Binoxide—
Genoa, 10 t. 11 c.
Barium Carbonate—
Hamburg, 154 t.
Barytes—
Antwerp, 2 t.
Bleaching Powder—
Aarhuus, 19 t. 19 c.
Copenhagen, 1 6
Finland, 39 19
Christiania, 10 4
Rotterdam. 20 3
Hamburg, 5 4
Nakskov, 2 13
Antwerp, 37 5
Amsterdam, 14 16
Stockholm, 19 19
Gothenburg, 20 8
Caustic Soda—
Antwerp, 9 t. 8 c.
Copenhagen, 8 15
Wasa, 124 5
Finland, 13 1
Helsingborg, 3 3
Helsingfors, 5 16
Stockholm, 20 8
Genoa, 17 4
Gothenburg, 4 18
Chemicals (*otherwise undescribed*)
Antwerp, 1 t. 9 c.
Litharge—
Hamburg, 2 t. 4 c.
Stockholm, 2 10
Magnesia—
Hamburg, 5 c.
Antwerp, 1 t. 9
Genoa, 19
Manganese—
Antwerp, 11 c.
Manganese Oxide—
Christiania, 1 c.
Manure—
Genoa, 86 t. 5 c.
Paint—
Rio de Janeiro, 1 t. 5 c.
Helsingfors, 11
Bergen, 11
Painters' Colours—
Hamburg, 1 ck.
Antwerp, 4 c.
Slag—
Christiania, 35 t.
Soda—
Copenhagen, 2 t. 13 c.
Helsingfors, 12 11
Helsingborg, 3 6
Nystadt, 12
Christiania, 13 1
Amsterdam, 10
Stockholm, 35 2
Soda Ash—
Bergen, 15 t.
Soda Crystals—
Gothenburg, 2 t. 13 c.
Rotterdam, 5 3
Sodium Silicate—
Antwerp, 2 t. 2 c.
Sodium Sulphate—
Gothenburg, 46 t. 10 c.
Sulphur—
Gothenburg, 75 t. 1,300 bgs.
Superphosphates—
Stettin, 520 t.
Riga, 814 6 c.
Tallow—
Genoa, 16 t. 17 c. 40 brls.
White Lead—
Copenhagen, 2 t. 16 c.
Raumo, 4
Stavanger, 10 4
Stockholm, 1 8

GOOLE.

Week ending August 3rd.

Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck.
Ghent, 11
Coal Products (*otherwise undes.*)—
Amsterdam, 46 cks.
Antwerp, 100
Boulogne, 3 10 tins. 5 pks.
Rotterdam, 12
Colours—
Amsterdam, 200 bgs.
Antwerp, 2 cks.
Boulogne, 11
Dyestuffs (*otherwise undescribed*)
Amsterdam, 1 ck.
Antwerp, 4
Hamburg, 2
Manure—
Dunkirk, 300 bgs.
Pitch—
Antwerp, 40 t.
Soap—
Antwerp, 75 cs.

GRIMSBY.

Week ending August 6th.

Chemicals (*otherwise undescribed*)
Malmo, 2 bxs.
Coal Products—
Antwerp, 19 cks.
Colours—
Hamburg, 59 cks. 60 cs.

PRICES CURRENT. WEDNESDAY, August 17th, 1898

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 %, and 40 % .. .. per cwt.	6/-	&	8/6
,, Glacial .. .. ,,		37	6
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	14	5	0
Alum (loose lump) .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	4	0	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B .. .. ,,	0	0	2½
,, =24° B .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	10	1	3
,, ,, (grey) Hull .. .. ,,	9	18	9
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	5
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9½
,, 50/90 ,, ... ,,	0	0	9½
Carbolic Acid (crude 60°) .. .. per gallon	0	1	11
,, (crystallised 40°) .. .. per lb.	0	0	7
,, (liquid 95/97% .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	0	19	6
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	52	1	3
,, Sulphate .. .. ,,	16	12	6
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80 % .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	17	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, Nitrate	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	5	0
,, Borate .. .. per cwt.	2	5	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P .. .. ,,	0	3	11
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	5	0
Stearine .. .. per ton	25	0	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. ..nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	5	0
,, Chlorate .. .. per lb.	0	0	3⅜
,, Cyanide, 98% .. .. ,,	0	1	1½
,, Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
,, ,, (Caustic Potash) 75/80 % .. ,,	18	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton (15 ton lots)	8	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,, (15 ton lots)	7	15	0
,, ,, (70 % Caustic Soda) ,, ,, ,, (15 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (15 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (15 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	4½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	9	5	0
,, Prussiate .. .. per lb.	0	0	5⅛
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	17	6
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6¾
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	22	0	0
Tin Crystals .. .. per lb.	0	0	5⅜
,, English Ingots .. .. per ton	77	10	0
Zinc (Spelter) .. .. ,,	20	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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AND

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LATE ADVERTISEMENT.

METALLURGICAL CHEMIST WANTED.—Apply, with particulars of experience, to C. Pass & Son, Ltd., Bristol.

Notices.

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Communications for the Editor, if intended for insertion in the current week's issue, should reach the office not later than **Tuesday morning.**

Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

Advertisements.

Prepaid Advertisements of Situations Vacant, Premises on Sale or To be Let Miscellaneous Wants, and Specific Articles for Sale by Private Contract are inserted in the *Chemical Trade Journal* at the following rates :—

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Trade Advertisements, Announcements in the Directory Columns, and all Advertisements not prepaid, are charged at the Tariff Rates, which will be forwarded on application.

Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

THE SCARCITY OF WATER.

IT may seem strange to some that such a familiar and abundant commodity as water should ever cause any anxiety concerning its purity and its supply to town-dwellers in this age of invention and advancement; but nevertheless the fact remains that the question of water supply is as knotty a one as that of the disposal of sewage, and not only causes much anxiety and inconvenience to the citizens of many important towns, but is even a constant source of trouble to the inhabitants of the accepted hub of the universe itself—the metropolis.

With the advent of summer the appearance of correspondence on this subject in the daily papers seems to have become quite an institution, but this fact alone is a reflection upon those who navigate the municipal craft of the metropolis. Were there any substantial improvement in the London water supply this correspondence would inevitably die a natural death; but the fact that it persists as it does, warrants a close and prompt investigation of the conditions which provoke such outspokenness, even though much of it be of the usual plaintive, petulant, or presumptuous order.

The people of Liverpool and Manchester have fortunately and wisely taken exceptional care to ensure an ample water supply for themselves. Ten years ago they suffered much through scarcity, but as soon as it was realised that the supply was insufficient, remedial measures were sought.

Moreover, that eminent authority, Dr. Tatham, so forcibly propounded his contention, that he would willingly accept sole responsibility for the public health if only the city fathers would supply the citizens with the *quantum* of water which he held to be essential to ensure sound sanitation, that people became disposed to yield to his importunity, even though it pledged them to such costly programmes as the Thirlmere and Vyrnwy schemes.

But now that they have seen the evils which have overtaken London, Leicester, and Maidstone, even the most obdurate of the doubting Thomases have withdrawn their opposition.

The experience of these two cities should give heart to those who are fighting for pure water and plenty of it in London. It is most unfortunate that the greatest scarcity should always occur in the East-end, where the population is densest and dirtiest. One letter, signed by twelve medical practitioners in the affected district, states that since the Company cut down the supply of water to six hours daily they already have in their respective practices numerous cases of diarrhœa, and the proportion of these will now enormously increase. Nor apparently will the Water Company be content until they have been directly responsible for some hundreds, at least, of deaths both among adults and infants, for, in the opinion of these doctors, the stoppage of the water supply will as directly cause their deaths as if the patients had been actually poisoned.

With the evil odour of the Maidstone scourge still in their nostrils, this must be anything but pleasant reading for Londoners.

It is all very well for the Company to plead that in the last 12 months the rainfall has been less than it has been for many years—something under 15 inches; to court pity by stating that the New River Company take 22½ million gallons per day from the Lea before they can take a drop; or to talk vaguely about looking further afield for supplies; but in the management of a water company a prescient policy is absolutely imperative, and there is no room for excuses when there has been abundant evidence that the evil day of inadequate supplies was fast approaching. If there is one matter more than another upon which the public cannot be too inquisitive or insistent it is their water supply.

Slowly but surely we are being driven to the conclusion that companies cannot safely be trusted with the supply of water to large towns. It is the thing of all things that should be under direct municipal control.

It may seem incredible, but it is true all the same, that at Maidstone, of all places, the Water Company have announced that the supply will be cut off between 7 p.m. and 6 a.m. until further notice; and this just when the town is being crowded by frequent arrivals of hop and fruit pickers.

We venture to surmise that if the Water Company were not a money-making concern, the Town Council would not have been so slow in compelling the Company to fulfil their contract.

The public might well express indignation at the Council even allowing the stoppage notices to be posted when another Water Co. has offered an additional supply of 100,000 gallons daily; especially when in the face of this offer the Maidstone Co. has the audacity to suggest that the only way to increase the supply is to revert to the Farleigh Springs, to the water from which the terrible outbreak of typhoid fever last year was traced. And this at Maidstone! Having recovered from their epidemic, this is how they prepare for the visit of the Royal Agricultural Society and its Show next year. If it is held there after all, and the same enlightened water policy is in vogue, we shall give it a miss. It is to be hoped that the lessons of London and Maidstone may benefit other towns and cities while there is time to forearm.

THE CARRIAGE OF DANGEROUS GOODS AT SEA.

BOARD OF TRADE INSTRUCTIONS.

THE Board of Trade have just issued further instructions to their surveyors relative to the carriage of dangerous substances on shipboard. With regard to the

CARRIAGE OF SULPHURIC ACID UNDER DECK

the Board state that they have recently had under consideration the conditions under which strong sulphuric acid contained in electrically-welded steel drums—holding about half a ton each—can, with proper regard to safety, be carried on board ship and stowed under deck.

Two steel drums of the following dimensions were tested to destruction:—

External Diameter. ft. in.	Length over all. ft. in.	Thickness of Body. in.	Thickness of Ends. in.	Approximate weight Su'phuric and Acid. lbs.	Remarks.
1 5	2 2½	·07	·08	410	Ends unstayed.
2 1½	3 4¼	·09	·087	1,420	Ends unstayed; body strengthened near the centre part by two I-shaped rolling rings, 1½in. deep.

The ends were flat and flanged at the periphery and electrically welded to the body. The results showed that they are strong enough to withstand rough usage when filled with sulphuric acid.

As regards stowage, the Board of Trade are advised that the acid can be carried with safety under decks if the drums are embedded in coal to a depth of not less than three-fourths the diameter of the drum, it being of course understood that the quantity of coal must be sufficient to absorb any leakage from the drums, and for this purpose a depth of one foot of coal for every hundredweight of acid contained in the largest drum in the shipment, but with a minimum depth of six feet, may be deemed sufficient.

In the event of leakage, the Board of Trade are advised that coal even in a powdered state will not evolve heat by reason of the presence of sulphuric acid, and that the marketable condition of only so much of the coal as is wetted by the sulphuric acid is affected.

In issuing this notice the Board of Trade think it desirable to indicate the possible results that may be anticipated as regards spontaneous combustion in a cargo of coal on the surface of which drums of sulphuric acid have been embedded.

1. If the sulphuric acid escapes into the coal spontaneous combustion will not take place within the region of the leakage.

2. If the spontaneous combustion takes place first, then the rupture of the drums, and consequent escape of the sulphuric acid, will retard or extinguish the fire by the production of sulphurous acid vapour, in which combustion cannot be sustained. This gas has a pungent odour and a strongly suffocating effect, so that great care should be taken to keep away from it. Coal wetted with acid should not again be used.

The Board are aware that it is the practice at some ports to stow sulphuric acid in a compartment by itself on a layer of chalk, but the leakage of sulphuric acid on to the chalk would produce carbonic acid gas, a heavy odourless gas, which it is dangerous to inhale, and which gives no warning of its presence. For these reasons the ventilation of a space where this practice is followed should be carefully attended to before any person is allowed to enter the compartment, the down-cast being carried as low as possible.

It is recommended that wherever sulphuric acid is carried under deck, the precautions indicated above should be observed, but it is of course to be understood that drums of sulphuric acid should not be stowed on coal known to be specially liable to spontaneous combustion.

STOWAGE OF DANGEROUS GOODS.

The attention of the surveyors is drawn to the case of the steamer *Legislator*, of Liverpool, on board which vessel a serious fire recently occurred, resulting in the loss of the vessel with several lives, owing to the indiscriminate stowage together on deck of "dangerous goods" and chemicals.

With a view to the prevention of similar casualties in future, the surveyors are instructed, when on their rounds of inspection of vessels loading, to use all due diligence in keeping themselves informed as to what vessels are likely to ship "dangerous goods," and when inspecting the stowage of such goods to see that any one description of "dangerous goods" shall be shipped apart from all other goods whether dangerous or not, except in the case of certain combinations which may be approved by the Board of Trade.

This precaution is so obvious in the interest of shipowners that, if properly explained, it is not anticipated that any difficulty will be experienced, but if the surveyor be unable to get this instruction carried out, the case should be treated as one of "improper loading" within the meaning of the 459th section of the Merchant Shipping Act, 1894.

Correspondence.

**** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

THE BRITISH ALUMINIUM CO. AND THE SUPPLY OF BAUXITE.

(To the Editor of the Chemical Trade Journal.)

Sir,—In reference to the report of Messrs. The British Aluminium Co., Ltd., in your issue of the 13th inst., in reply to a shareholder, the Chairman said: "The bauxite was obtained from their mines in the North of Ireland which were practically inexhaustible; at all events, they had enough to last them for forty to fifty years."

How is it that the Company in question is importing and using French bauxite?

Yours, &c.,

Aug. 18th, 1898. Larne.

ANSWERS TO CORRESPONDENTS.

T. D. C. (Syra).—It is one of the best books of its class. It was published last year for the first time. It seems well spoken of generally.

M. W. L. Co.—Try Locker and Co., Warrington, and W. Gardner and Sons, Gloucester.

R. W. and Co. (Magdeburg).—As far as we know they are only "projected." The best and most effectual procedure would be to apply to H.M.'s Consul, at Berlin.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Refining Oils. E. Ekenberg. 17,087. August 8.
Distributing Sewage on Filters. W. M. Ducat. 17,090. August 8
Matches without Phosphorus. A. Minter. 17,097. August 8.
Apparatus for Testing Anthracene. F C. Hart. 17,100. August 9.
Apparatus for Testing Gas Liquor. F. C. Hart. 17,101. August 9.
Manufacture of Ethyl Alcohol. F. R. Coudet. 17,159. August 9.
Producing Lead Oxide. Matthew's, Lancashire, Cheshire, and North Wales District White Lead Co, S. Pope, and G. V. Barton. 17,118. August 9.
Improved Treatment of Litharge. Matthew's, Lancashire, Cheshire, and North Wales District White Lead Co., S. Pope, and G. V Barton. 17,180. August 9.
Manufacture of Caustic Soda, Sodium Carbonate, and Carbide from Salt, or Sodium Sulphate or Sulphite. A. S. Bower. 17,243. Aug. 10.
Purifying Water, etc. M. Otto. 17,257. August 10.
Product obtained by Dissolving Ozone in Petroleum. M. Otto. 17,258. August 10.
Producing Ozone. M. Otto. 17,260. August 10.
Manufacture of Sulphurous Acid, Sulphuric Acid, and Sulphuric Anhydride. G. W. Johnson. 17,266. August 10.
Filter Presses. J. Metzger. 17,296. August 10.
Producing Lead Oxide. R. Matthews. 17,329. August 11.
Producing Lead Oxide. R. Matthews. 17,330. August 11.
Separating Zinc, Cadmium, etc., from their Alloys. W. Florence. 17,353. August 11.
Electrodes for Obtaining Ozone. D. Martini. 17,359. August 11.
Improvements in the Manufacture of Caustic Alkali and Sodium. J. C. Graham. 17,415. August 12.
Improved Siccative Oils and Varnishes. C. Weygang. 17,478. August 13.
Fireproofing Composition. G. X Dime. 17,497. August 13.
Cleansing Compositions containing Ammonia. H. L. Haas. 17,510. August 13.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

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Improvements in the Process of Manufacturing Phosporus, and other Materials C. S. Bradley, Avon, Livingston, New York State, and C. B. Jacobs, East Orange, New Jersey, U.S.A. Eng. Pat. 10,290. May 5, 1898.

A charge of phosphatic material, such as rock phosphate, burnt bones, &c., is mixed with enough carbon to combine with all the oxygen and also the calcium so as to form carbide of lime. The proportions recommended are :—310 lbs. of calcium phosphate and 200 lbs. of ground coke, which should yield about 192 lbs. of carbide and 62 lbs. of phosphorus. The charge is heated in an electric furnace, the volatilised phosphorus passing from the top of the furnace to a condenser. There are two figures.

A Machine for the Extraction of Liquid from Sewage Sludge and other Substances. C. J. Lomax, 19, Grosvenor Chambers, Manchester. Eng. Pat. 19,916. August 30, 1897.

The sewage is forced into a horizontal cylinder, of any desirable shape, fitted with a spiral conveyor. In the three figures which accompany the patent the cylinder is the shape of a tundish. The walls are perforated and hold between them a felt or other filtering medium through which the liquid portion is forced under pressure, while the cake of sludge deposited is scraped off, carried forward, and discharged from the end of the tundish "stem" by the conveyor.

Improved System or Apparatus for Treating Seaweed for the Manufacture of Products therefrom. A. Krefting, 18, Kort Aldersgade, Christiania, Norway. Eng. Pat. 12,416. June 2, 1898.

There is considerable difficulty in filtering the solution of seaweed obtained by the chemical treatment described in patent 11,538/96 and others, owing to the viscous nature of the solution. As the result of many experiments it has been found that the only successful method is to feed the solution on to a mesh which is constantly being cleansed. Three endless belts of some suitable filtering material are kept running one above the other. They are provided with a catch tray underneath the upper side of the travelling belts, and a trough at the end. A jet of water washes off the solid particles into this trough, and conveys them on to another series of filtering belts. The liquid portion which passes through the filter cloth into the trough beneath is carried by a pipe on to the travelling belt next below, and so on. Instead of travelling belts, a series of revolving drums covered with filtering material can be used. Both arrangements are illustrated.

An Apparatus for Inducing Artificial Respiration. E. L. Doyen, 5 Rue Cotta, Reims (Marne), France. Eng. Pat. 18,696. August 12, 1897.

A double chambered bellows is provided with a rotary distributing valve which, by the compression and the expansion of the bellows, enables the operator to aspirate oxygen or air, force it into the lungs, and exhaust the latter in rotation. The apparatus as a whole is simple, and the operation of the distributing valve ingenious without being very complicated. There are seven figures, for particulars of which the specification must be consulted.

Improvements in the Oxidizing of Oils. W. G. Rosenblum, Imperial Chambers, Cursitor-street, and The Commercial Ozone Syndicate, Limited, 31, Lombard-street, London, E.C. Eng. Pat. 6,464. March 16, 1898.

The invention has reference chiefly to the preparation of drying oils in which mixtures are used in the place of linseeed oil alone, by which means the drying property is accelerated. Thus a mixture of 50% linseed oil and 50% cotton or rape seed oil when ozonised dries in half the time taken by linseed oil alone. The ozonising is conducted in the apparatus described in patent 9,529/97 (*C.T.J.*, No. 574, p. 345.)

THE PURE BEER COMMITTEE.

THE Pure Beer Committee, the appointment of which was the practical outcome of the Pure Beer Bills periodically brought in by Mr. Cuthbert Quilter, is expected to shortly complete its labours, but present indications show that little hope can be entertained of a unanimous report. The Committee, under the chairmanship of Lord Pembroke, took a good deal of evidence, very largely of a scientific character, and there was considerable conflict of opinion among the witnesses, although the advocates of pure beer consider that the balance of testimony was in their favour. The principal they are contending for is that the use of the term "beer" should be restricted to the product of the two ingredients barley malt and hops, which, they say, is the popular idea of beer, in order to distinguish it from the liquor brewed from other materials, and thus prevent the public being deceived. This view of the case will probably be asserted in a minority report. It may be added that the question of pure beer is likely to be brought rather prominently forward during the next few months, owing to the failure of the English hop crop, which is at least a fortnight later this year, and, according to the present indications, will show a marked deficiency on the average of recent years. Great Britain, states a well-known expert, usually produces half a million hundredweights of hops, but his forecast of the 1898 crop puts it at not more than 320,000 cwt. The consequent increased prices for hops may therefore be expected to cause some demand for hop-substitute for the inferior grades of beer.

INDUSTRIAL ENTERPRISE IN RUSSIA.—A syndicate of English capitalists is about to form a limited company for the establishment of bleaching works at Lodz, while Belgian money will be invested in the construction of a lace factory at Warsaw.

PETROLEUM IN CANADA.—Following upon the report of a valuable discovery of petroleum in the Athabaska district of the North-West Territories, it is announced in the Government press that large concessions in the new oilfields will be given to an English syndicate.

ENGINEERING ERRORS AT THE MANCHESTER SEWAGE WORKS.—A meeting of the sub-committee appointed by the Rivers Committee of the Manchester Corporation was held on Monday, to inquire into certain engineering errors and omissions in the catch pits at the sewage works at Davyhulme. A report was drawn up, and it will be submitted to the Rivers Committee at an early date.

THE PRIMITIVA GAS CO.—The Primitiva Gas Co., of Buenos Ayres, which has recently successfully negotiated the issue of £200,000. 5% debenture bonds, is one of the most successful gas companies in the world, and was formed in the Argentine capital so far back as 1855. Its progress has been remarkably cumulative, as its dividend record conclusively indicates. Its share capital is 4,000,000 dols. national currency, divided into 80,000 shares of 50 dols. each, fully paid. In recent years the following dividends have been paid :—For 1892, 15 per cent.; for 1893, 16 per cent.; for 1894, 14 per cent.; for 1895, 20 per cent.; for 1896, 20 per cent; for 1897, 24 per cent. In addition there are reserve funds taken from undivided profits amounting to 1,100,000 dols. national currency, and a large portion of the nett profits has also been invested in new works. The company, in addition to the business of supplying gas, are chemical manufacturers, and have recently undertaken the electric lighting. The object of the present issue is to provide for a floating debt, which amounted in December, 1897, to about £110,000. and also for further extensions of the works.

SEWAGE ANALYSIS AND STANDARDS OF PURITY.

THE following paper was read recently before the Society of Public Analysts by Mr. C. J. Moor. The digest of the discussion is from the *Analyst*, the official organ of the Society :—Crude sewage as brought to purification works necessarily varies from town to town. It varies in composition according to the presence or absence of abnormal institutions, such as factories, and according to the manner of its collection ; for example, as to whether this is from a high level by continuous gravitation, or from a low level by continuous pumping. The latter is a matter of considerable importance, because in the older precipitation processes it was very difficult to deal with sewage that was stale, as it always is when collected from a low-level system, which is pumped during a few hours only of the working day.

Sewage varies in quantity and in concentration, primarily, according to the extent of the water supply in gallons per head of population, and, secondly, according to the rainfall, etc.

In a given town it varies in all respects from hour to hour, and, as a rule, to a less extent from day to day and from season to season. The extent of none of these variations can be stated in advance. In the estimation of the relative efficiency of the purifying processes used at different towns, it is therefore the ratios of the measurable factors of impurity in the effluent to those in the crude sewage from which it was derived, that must be compared so far as it is possible to obtain them.

In the case of sewage farms these are difficult to obtain. The sewage which is spread over a field will not all find its way into the effluent. Some will be absorbed in the ground, and there disintegrated by the action of micro-organisms and of higher plants.

This is the purification process proper, and its extent will vary up to a limit with the extent of saturation of the soil with previous additions of sewage.

Another part may, however, be temporarily arrested, and the interval which elapses before it is washed through may vary, not only with the nature of the ground and of the crops, but with meteorological and other conditions. This is not necessarily a process of purification, and the comparison of the effluent with the crude sewage may be improperly favourable or unfavourable to the process, according to the time at which the effluent was taken. Evaporation from the surface of the sewage-field will in all cases tend to exhibit the degree of purification as less than it actually is, and less to an extent varying with the presence and nature of the drainage and with the temporary conditions of the soil in respect to saturation with sewage. Dilution by rain will affect both sewage and effluent, though possibly not to the same extent ; but a more serious variable is the height of the ground-water, which may dilute the effluent to an extent which would altogether vitiate any figures that did not take account of it.

These are only some of the factors affecting sewage-farms, which are liable to vary beyond control and to some extent beyond measurement They are indeed inevitable in any system in which provision is not made for the uniform treatment of all parts of the crude sewage.

In the artificial processes, whether chemical, electrical, bacterial, or bacterio-mechanical, the difficulties in the way of obtaining comparable figures are considerably less.

In all of them the whole of the sewage is subjected to a uniform treatment, the interval between the inlet and outlet is known, and the factors of variation between town and town, hour and hour, day and day, may be expected to effect the constitution of the effluent no less than that of the sewage, or at least to affect it to an extent so small as not to seriously invalidate the comparison it is desired to make.

The following scheme of observations would be applicable in most cases where the question to be settled is the efficiency of a particular process at a particular place :

Town Variables.—1. Note nature and extent of factories or other abnormal sources of pollution.

2. Chart the water-supply for previous week and for period of experiments, and ascertain that it is normal.

3. Chart rainfall during the experiments and for the previous week.

4. Note the temperature of the air and sewage during experiments.

Works Variables.—1. Ascertain dimensions of works, the length and fall of sewers, and the general structural details of works and sewage, and whether pumping is required—*i.e.*, are there low-level sewers ?

2. Chart the volume of sewage at intervals during the experiments.

3. Where screens are in use, estimate the solids they retain.

Sewage Variables.—1. Take samples at intervals during the first twenty-four hours of sewage and effluent, determine the chlorine and loss on ignition for each, and compare the result with that of an average sample taken in quantities proportional to the flow for the time being during the working day, measured so as to include the time of maximum impurity. If these factors give sensibly the same results as average samples, the remainder of the investigation can be conducted on average samples. All samples, average or otherwise, must be kept in ice from the time at which they were taken up to the time of examination, and the interval should be as short as possible.

2. The following estimations and observations should be made :

PHYSICAL EXAMINATION.

Smell.

Colour.—Whether any in one inch in white dish.

Turbidity and determination of suspended matter, if present.

CHEMICAL EXAMINATION.

Total Solids.

Mineral Solids.

Loss on Ignition.—I attach considerable importance to this, and shall refer to it later on.

Chlorine.—This figure is of high value in enabling us to identify the effluent with a sample of sewage with which it is desired to compare it. If one goes to a sewage works at 11 or 12 o'clock, when the sewage is foulest, and takes samples of the raw sewage and of the effluent, they will almost invariably not correspond. An example of this is shown in the case of some analyses made for the Manchester Corporation, the figures of which appeared in the *Sanitary Record* for May 27th. A sample of raw sewage contained 14·9 grains of chlorine per gallon, whereas the effluent contained only 6·3 grains per gallon, showing that the sewage corresponded to a period of considerable impurity, while the effluent was probably derived from sewage that was not nearly so foul.

Hardness.—Considerable hardness is produced on adding the large quantities of lime sometimes employed, as in Hansen's process, in which lime and sulphurous powder are used, or in other processes where lime and alumina salts are used.

Nitrites.—I regard the presence of these as showing a want of free access of oxygen. They are not often found in effluents unless the latter have been bottled up and kept in the laboratory for some days, in which case nitrites are always present in large quantities.

Nitrates.—If we determine that nitrates ought to be present in definite quantities, it will probably compel those works at which precipitation is practised to add filter-beds to their plant. The presence of nitrates in the effluent is highly desirable, as showing that oxidation has proceeded to some extent, and that true purification has therefore begun, and some figure should be provisionally fixed so that at least a certain quantity of oxidized nitrogen should be present.

Saline Ammonia.—This cannot be objected to as a natural step in the breaking down of nitrogenous matter.

Albuminoid Ammonia.—The lower the quantity of this, the better.

Oxygen Absorbed.—Four hours at 80° F., Tidy's modification of Forschammer's process.

3. Chart the temperature of sewage and effluent. In some bacteriological processes there is reason for supposing that the temperature rises during the operation.

The following supplementary estimations from a bacteriological point of view would add greatly to the interest of the determinations above mentioned :

1. The number of bacteria, in both sewage and effluent, that grow gelatin, and the number that liquefy that medium. These determinations will be of comparatively little value unless the following estimations are also undertaken, namely, an estimation of those organisms that live at blood-heat, and of the anaerobic bacteria present, which must, of course, be cultured in a neutral gas under special conditions.

In addition, the investigation of the bacterial contents of the effluent in particular would not be complete without a special estimation of the nitrifying bacteria, which only grow on special media, such as silica jelly. From these considerations it will be conceded that a bacteriological investigation (even if we had the power of duly interpreting the results when obtained) would be no light matter ; and in the present state of our knowledge it could not yield results of anything like the practical value that we can derive from a chemical examination.

In regard to the relative importance of the chemical processes, I will not go over ground which is obviously familiar to all of us ; but I would draw special attention to the determination of the "loss on ignition" as being one of the most important factors for characterising a sewage in respect of its richness in organic matters. Personally, I think for this purpose it is to be preferred as a characteristic estimation to the results of the popular "oxygen-absorbed" process. For instance, cellulose in various forms occurs in considerable quantities in sewage, and this, while it would probably not be attacked by the permanganate used in the "oxygen-absorbed" process at blood-heat, would certainly be liable to undergo bacterial decomposition and to produce offence. No doubt this would come out in the determinations of organic carbon and nitrogen which have been recommended by a high authority for the examination of sewage.

It must be remembered, however, that life is short, and these processes are long ; and it is in the belief that their adoption would tend to the limitation of the number of determinations, and through this

cause a far greater loss in useful information than would be gained by their practice, that I have intentionally omitted them from my list.

By proceeding as I have described, the principal factors affecting the efficiency of sewag purification processes can be obtained, and while the selection of observations which I have made is subject to criticism, there will be probably little fundamental differences between us as to the necessity and sufficiency of such observations or their equivalents. The interpretation of these results is, however, a matter of more complexity, and more likely to excite differences of opinion. On that ground, and rather with the object of drawing discussion than of formulating any final statement, I submit certain considerations which appear to me to be fundamental. In the first place I am convinced that the purification of sewage, so far as it is contemplated by any existing scheme, can only be regarded as a chemical process, and that it is in terms of chemical determinations alone that the results of any process for effecting it can be expressed. I do not lose sight of the fact that the processes (which through the industrious genius of one of our members, and of others who have worked on similar lines, have now been shown to be the most promising) are bacterial; but it must be clearly remembered that the bacteria so involved are merely means for applying biological energy in place of the chemical energy previously employed, and are used for the precisely identical purpose of altering the sewage in its chemical composition, from a substance highly favourable to the growth of putrefactive and some other organisms, into a substance not specially favourable, and perhaps ultimately inimical to their growth. The only terms therefore in which a *standard of purification* for a process or a *standard of permissible impurity* in an effluent can be expressed *are necessarily and solely chemical.* The function of bacteriological examination is in no way depreciated by this circumstance. If the bacteria of sewage were constant in the sewage of all towns and all epochs, and if the circumstances affecting their survival and metabolic activity were the same in all sewage, or, if variant, they equally affected all the organisms essential to bacterial purification, the place for bacteriology in the matter would be confined to the determination of the extent to which effluents favoured or impeded the growth of undesirable organisms, in particular those which directly cause disease, and those which produce offensive organic substances.

This function it must have in any event, and in the present state of knowledge no general statement can be made in regard to the substantial constancy—that is, as to the constancy in particulars material to the purification processes—of the bacterial conditions to which I have referred. It remains, therefore, for bacteriology to determine the relation between the various organisms and the various chemical factors and physical conditions which occur in practice. The problem is one of extreme complexity, and its investigation is the more tantalising by reason of the probability that many of the organisms normally found may be individually indifferent in the purification process. It is on this ground that I think the present object of such investigation should be rather the examination of these organisms in groups, collected under such characters as those which I have selected, than the individual identification of particular organisms. Such inquiry, in any case, has far more than academic interest. It may well turn out that in some cases artificial addition of bacteria may form a part of that process, which in the particular circumstances is the most efficient. There remain, again, questions which experience at present has not gone far enough to settle; such, for instance, as the extent, if any, to which the first products of bacterial energy are in stable or unstable equilibrium, and their liability, or freedom from liability, to become the subjects of secondary disintegrations, and to result in secondary degradation of the effluent. But whatever result such investigations may have, and essential as I regard them to placing the problem of sewage purification on a satisfactory basis, *it is in quantitative terms of the chemical products* which varying bacteria and varying conditions produce that the results of bacteriological investigations must be expressed before they pass over from the domain of experimental science into that of practical application.

In the absence of such data, it is impossible to define any standard either of percentage purification or of maximum permissible impurity which can be regarded as final or constant for all places. Several standards of permissible composition have been proposed; and perhaps it may be convenient if I re-state some of them. There is, first, that of the Rivers Pollution Commissioners:—

	In Parts per 100,000.			
	Organic Carbon.	Organic Nitrogen.	Albuminoid Ammonia.	Oxygen Absorbed.
Rivers Pollution Commissioners..	2·0	0·3	—	—
Derbyshire County Council.....	—	—	0·1	1·0

In addition, the Rivers Pollution Commissioners' standard requires that a certain degree of alkalinity or acidity is not to be exceeded, that the matter in suspension is not to exceed 3 parts per 100,000 of dry mineral matter, nor one part of dry organic matter, that there shall be no visible colour in a stratum 1 inch deep when viewed in a white dish, nor any metals except calcium, magnesium, potassium, or sodium present to a greater extent than 2 parts per 100,000, and a limit is also set for free chlorine, for arsenic, and for sulphur as sulphuretted hydrogen or free sulphuric acid.

The other standard, suggested by Dr. Barwise, is of a much more practical nature, though it appears to me to be somewhat too severe, and is, in my opinion, rarely attained by any of the processes in common use. The Thames Conservancy, in the upper reaches of the river, recognises, as a "good effluent," any effluent which gives less than 0·2 part per million of albuminoid ammonia.

SUGGESTED STANDARDS.

I should be inclined to suggest the following standard as satisfactory for general use:

	Parts per 100,000.
Total suspended matter (not to exceed)	2·0
Albuminoid ammonia	0·2
Oxygen absorbed	0·75
Total hardness	25 0
Nitrogen as nitrates (not to be less than)	0 75

The amount of nitrates should be insisted on, as showing that true purification has begun, and that there is a store of oxygen that could be drawn on, as a guarantee against possible putrefaction.

I base this standard on the fact that, on the examination of a large number of samples of effluents, I have found no sample which, falling within this standard, became putrefied on keeping either in closed or open vessels. For my own part, therefore, I should at present prefer this standard; but I put it forward with the reservation that any standard must at the present time be regarded as tentative, and be subject to, and likely to undergo, revision in, I hope, no distant future, when more exact data correlating the bacterial, physical, and chemical circumstances are available. In the meantime, however, I think that in this, as in so many other matters in which our profession is concerned, it would add to the authority of all of us, and conduce to the advantage of the public, if we could arrive at some agreement as to the standard which should, for the time being, be adopted in common.

THE DISCUSSION

was taken part in by Messrs. Dupré, Voelcker, Rideal, Dibdin, Cassal, and Chapman. The President, in his remarks said, that the subject of standards was a most difficult and, indeed, a dangerous one to deal with. The real question in any given case was probably how far the effluent approximated to the best possible effluent that could be reasonably expected, having regard to local circumstances and to the means which it was reasonably possible to employ. The great absurdity attaching to standards under some conditions had once been shown by a well-known manufacturer at a meeting of the Society of Chemical Industry, at the time when it was suggested that the standards recommended by the Rivers Pollution Commission should be legalised. That gentleman observed that he daily ejected from his works an effluent which in very nearly every particular transgressed the limits laid down, the effluent being, however, merely the water of the river on which his factory was situated, which water was pumped into the works for cooling the condensers, and afterwards returned in its original condition to the river. The river, however, would be held to be thereby polluted, if the suggested standard were legalised. While, however, it was exceedingly difficult to lay down general standards, it was very desirable that there should, if possible, be some settled means of making the different determinations involved in analyses of this kind. It seemed, for instance, particularly important to decide and agree whether, if an effluent contained suspended matter, it should be shaken up and analysed as a whole, including the suspended matter, or whether it should be filtered, or whether it should be allowed to settle; and also whether, if it was filtered, a close paper or a loose one should be used. Such considerations as these gravely affected the determinations of oxygen absorbed and albuminoid ammonia.

In replying to the discussion Mr. Moor said that he very much appreciated the sympathetic criticism to which his remarks had been submitted, and, while opinions seemed to vary on points of detail he could not help thinking that even the variety of opinion which had been expressed emphasised the desirability of having some set of figures on which an effluent could at least be condemned. He had endeavoured very clearly to indicate that the particular set which he had suggested was by no means put forward either as a final standard or as an ideal effluent. Perhaps his meaning would have been made clearer if he had described these figures, as he had in fact intended them, as constituting, not the standard for an effluent which could permanently or in all circumstances be adopted, but the maximum of impurity which should in any circumstances be allowed. By the adoption of this maximum, he in no way intended to suggest that such effluent would in all cases be permissible; for example, he would regard it as quite out of the question for an effluent to be discharged in any quantity above a water company's intake. In making this remark, he desired to add, for fear of misunderstanding, that, in his judgment, no chemical criteria could ever warrant the safety of an effluent above an intake; but that, as the danger would to some extent vary inversely with the

chemical purity, he would insist on a much higher standard for effluents supplied to sewage-drinking communities than that which he had discussed in this paper. None of the criticism which had been offered appeared to him to conflict with the adoption of these figures for this purpose, with the single reservation pointed out by Dr. Voelcker —that the hardness of effluents should be fixed in some relation to that of the water supply. His purpose in including this figure was of course to prevent the undue drugging of the water with chemicals employed in processes of treatment; and he suggested, therefore, as an emendation of the absolute figure which he had at first suggested, the provision that total hardness of effluent should not exceed that of the water supply by more than 25 parts per 100,000. He was in entire agreement with Mr. Cassal that at the present time no data existed warranting the description of an effluent as good or indifferent; but he still thought that there would be considerable advantage in having some figures by which in need it could be described as bad, as it followed logically, from what the President had rightly observed, such figures must represent the best effluent which could in all circumstances be attained. He did not understand the President to suggest that the figures which he (the speaker) had proposed were such as were likely to occur in a natural river; and if by artificial pollution a river had been so contaminated as to fall short of his modest requirements, he thought there would be every possible advantage in preventing ingenious and energetic persons, such as the gentleman to whom the President referred, from using such river for any purpose until they had gone up stream and compelled the persons polluting the river to leave off. Taking the determinations which he had suggested individually, he had no hesitation in saying in reply to the President's question that analysis must take impartial account of everything which appeared in the sewage; and, feeling as he did that suspended matter had no right in an effluent to any extent exceeding that which he had suggested, he was convinced that the only discrimination allowed to the analyst was the careful selection of an average sample, which then would be shaken up and analysed as a whole. So far as mineral matter was concerned, his experience was that it settled much more rapidly than animal and vegetable matter, that the reservation suggested by Dr. Voelcker was not likely to be needed in practice, and he, personally, had met with no case in which it would have modified his proposed criterion. It was to be observed also, from the bacteriological standpoint, that suspended matter was usually far richer in organisms than the liquid conveying it; and as it certainly could be prevented by reasonable measures, he thought it needless to make any allowance for cases in which a substantial part of it might be mineral.

So far as the albuminoid ammonia was concerned, no question appeared to rise as to the figure which he had suggested being too high. He personally preferred the oxygen-absorbed determination to that proposed by Dr. Dupré, because of its greater rapidity; but having regard to the difficulty of attacking all the organic matter in sewage by permanganate, especially where there was much suspended matter, he thought it might be worth considering whether one or other of the higher temperature processes would not be preferable for routine sewage examination to the ordinary Tidy modification of the Forchammer process, which is usually employed. He should have explained that in suggesting loss on ignition as a valuable characteristic of the same order as "oxygen absorbed," he had in mind the successive examinations of the same sewage, such as would occur in the examination of a process; and he quite agreed with Mr. Dibdin that it would not serve as a factor for comparison between sewages of different origins, and for this reason he had not proposed it as part of his suggested criterion. So far as nitrates were concerned, he was bound to say that while he had repeatedly found them in samples of which the examination had been delayed for a short time, he had never found them in freshly-examined samples. He recognised with Mr. Dibdin that there were other sources of oxygen in water than nitrates, but seeing that his (the speaker's) figure was only proposed as a minimum, he did not think that this fact would warrant the reduction of the figure of nitrates which should be required. The utility of this factor was evident from Dr. Rideal's meat-extract, which certainly would have been condemned for its deficiency in this respect, and with equal certainty, had it passed through any sewage process capable of bringing it up to the standard in this particular, would have ceased to be offensive. In conclusion, he would reiterate that the whole, if any, of the figures which he had proposed was not to constitute an ideal or permanent criterion, and in that sense perhaps the word "standard" would be as inapplicable to these as to other figures which had been proposed for the same purpose. His figures would unquestionably be superseded by others more severe when data were available for safely defining them. They might even now be supplemented, if it was thought desirable, by Mr. Dibdin's test of the survival of fish, or by Dr. Dupré's requirements of permanent aeration. But the speakers had not suggested, nor was he aware of any sufficient evidence at present available, to justify exclusive reliance on either of these tests; and as, therefore, a chemical criterion was undoubtedly necessary, he appealed to the Society to consider whether it was not for the public interest and for that of the profession that an agreement should be come to at least as to the figures on which all analysts would condemn an effluent.

ESTIMATING SULPHUR IN COAL.

A COMPARISON of the standard methods at present in vogue for estimating sulphur in coal has been prepared by Mr. G. L. Heath and communicated to the American Chemical Society. The paper contains a mass of experimental *data* bearing upon the respective merits of the processes tested. In this way much light has been thrown upon the variations effected by modifying the minor details of the standard processes and the precautions to be observed in their use, which the author sums up as follows:—

1. I cannot confirm the statement of Hundeshagen that Eschka's mixture does not retain all the sulphur from certain coals, and as far as my experience goes must agree with Handy's opinion with one qualification.

2 Rapid heating with magnesium oxide and alkaline carbonate in a deep crucible may be made to give a little lower results than slow heating in a shallow dish with such a coal as No. 12 (brown coal), but with coal No. 11 (jet) it was necessary to heat very slowly, even in a dish, so as to avoid too great a heat, which might allow dry distillation of combined sulphur without complete oixdation.

Hundeshagen's loss, which he attributed to the inability of sodium carbonate to retain all the sulphur of brown coals, may be due to rapid heating in a crucible of the sodium carbonate mixture, which is also more dusty than one of coal, magnesia, and potassium carbonate.

3. The "sintering" methods, when performed with good judgment, agree closely with the results obtained by fusion of the coal with sodium carbonate and potassium nitrate.

4. If the "fusion method" is used, or sodium peroxide employed as an oxidising agent, great care must be taken to dehydrate all silica by evaporation with hydrochloric acid.

Some chemists direct that the fused mass should be boiled with water and filtered before acidification with hydrochloric acid.* Other authorities state that the fused mass is to be dissolved directly in dilute acid.

The first procedure is to be preferred, as the iron oxide and insoluble matters are removed at once by the filtration of an aqueous solution of the fusion.

5. The purest and most efficient reagent to complete the oxidation of sulphur compounds in the aqueous solution of the ignited residue of the "ignition" methods is a saturated solution of bromine in water. The use of hydrogen peroxide involves the testing of every bottle of the reagent for the very variable quantity of sulphuric acid it always contains. If this impurity is determined by a blank analysis and the amount deducted in the proper manner, the results obtained by its use are quite satisfactory (see 1, 3, 4, 12).

If sodium peroxide is added at first to a mixture of coal and magnesium oxide, the action is too violent. If added when the coal is nearly burned, the mass, nevertheless, balls on heating and some soluble sodium silicate appears to be formed by the heating or during subsequent aqueous extraction, and the barium sulphate will be a little impure unless silica is dehydrated by evaporation.

In the writer's experience, no reagent gives as good results as the bromine water.

6. The five minutes' boiling of the ignited residue of coal ash, magnesium oxide, and carbonates with water (as generally prescribed by the authors) is sufficient to convert all the insoluble sulphates of lime, iron, etc, unless these substances are present in considerable quantity, or unless the magnesium oxide is a compact, heavy sample. Under these circumstances the boiling and extraction of the ignited residue with water should be prolonged for, say, an additional period of ten minutes—a precaution not alluded to by chemical authors, but a necessary one.

The two following experiments were made in order to show that this precaution must be taken with fuels, especially weathered coals, carrying a large amount of either iron or calcium sulphates.

TABLE III.

Sample No. 13.	Barium sulphate. Gram.
Taken, 1 + grams coal, yielding.....	0·0295
Added 0·1869 gram C P. calcium sulphate, yielding..	0·3202
Total.....	0·3507
Result of ignition, boiling five minutes with 100 cc. water + 15 cc. bromine and washing (blank allowed for)	0 2615
Deficiency=	0 0882

* Blair's Iron Analysis; see also Stillman's Engineering Chemistry, page 70.

Sample No. 14.	Barium sulphate. Gram.
Taken, 1 + grams coal, yielding.....	0·0325
Added 0·4070 gram weathered ferrous sulphate containing the equivalent of	0·3490
Total.....	0·3815
Result of ignition, boiling five minutes with 100 cc. water + 15 cc. bromine and washing (blank allowed for).....	0·3509
Deficiency=	0·0306

As far as my experience goes, the methods, irrespectively of Eschka and Hundeshagen, which involve a simple ignition at low temperature with a sulphur absorbent, are far preferable as rapid operations, suitable for technical work, to any plan necessitating a complete fusion with a consequent solution of silica. The two preferred methods will uniform'y furnish accurate results, within usual limits of error in sampling, if the operator will only exercise a little judgment in certain cases.

With anthracite coal and coke there is no liability to error. With softer fuels, especially lignites, the materials should be especially well ground, well mixed, and stirred during the ignition in an open dish, and if the proximate analysis and the appearance of the ash indicate that the coal contains a large percentage (over 3 per cent.) of sulphur as pyrites (or calcium sulphate in the ash), the boiling and washing should be continued for a longer time, and the washed residue finally dissolved in acid and qualitatively tested by itself.

THE GERMAN BEET SUGAR INDUSTRY.

OFFICIAL statistics of the production of beet sugar in Germany in 1896-97 show that during that season 399 beet sugar manufactories were in operation, against 397 in 1895-96. The whole of the 399 factories used 13,721,601 tons of beet root in 1896-97, compared with 11,672,816 tons in 1895-96, and 14,521,029 tons in 1894-95. The average price per ton of beet root in 1896-7 was 17s. 8½d. (against 17s. 8½d. in 1895-96 and £1 0s 2½d in 1894-5), and varied between £2. 0s. 10d. per ton (in Würtemburg) and 17s. 1¼ (in Westphalia). The beet root used was raised in 1896-97 on an area of 1,049,881 acres (against 920,749 acres in 1895-96), which gave an average yield of 13 tons per acre (against 12·67 tons in 1895-96). The consumption of foreign-grown beet was very restricted also last year, and was greatly exceeded by the export of home-grown sugar beet. According to the statistics only 32,106 tons of fresh sugar beet were imported, of which 25,990 tons came from Russia, while the quantity exported amounted to 52,225 tons, of which 50,481 went to Austria. The production of raw sugar of all descriptions was 1,738,882 tons in 1897, compared with 1,537,522 tons in 1896 and 1,766,805 tons in 1895. The exports of raw sugar from Germany in 1896-97 reached 760,657 tons, against 504,444 tons in 1895-96, and were consequently over 50 per cent. higher last year than in the preceding season. The imports were insignificant, only 665 tons, against 765 tons. In 1887-88 the German exports of raw sugar amounted to 344,711 tons, and the imports to 4,079 tons. The exports to the United States increased by 307,906 tons; to Great Britain by 14,943 tons. The United States took last year 487,729 tons; Great Britain, 237,786 tons; British North America, 13,922 tons; Holland, 11,821 tons. The home consumption decreased considerably, from 744,367 tons in 1895-96 to 561,882 tons in 1896-97, or by 24½ per cent. This gives for last year 23·21lb. per head of the population, against 31 15 in 1895-96. The complete figures for the season of 1897-98 are not yet available; but it is stated that up to the end of May, according to preliminary statistics, 1,636,907 tons of raw sugar of all descriptions had been manufactured from 13,698,281 tons of beet root. As there was a heavy beet crop in the season of 1896-97 it is estimated that the production of raw sugar in the German Empire in 1897 will reach 1,875,000 tons.

AN AMERICAN CONSUL ON THE CHEMICAL TRADE.—Mr. James Boyle, the United States Consul at Liverpool, in making his report on the English chemical trade, refers to the new works which the United Alkali Company is now erecting for the manufacture of chemicals at Bay City, Michigan. The question of greatest interest in the trade, he reports, is the possibility of producing bleaching powder and other chlorine products cheaper than they now can be produced by the Leblanc process. The electrolytic process has been used for some time in Germany, and to a small extent in the United States, but in England it is in its experimental stage. The heavy decrease in the export of chemicals from England to Germany and the United States is compelling English manufacturers to find some cheaper way of producing bleaching powder and other chlorine products. The exports of chemicals from Liverpool to the United States have declined from over eight and a half million dollars in 1891 to less than four millions in 1897.

Reports of Companies.

THE ALUMINIUM CO., LTD.

THE report of the directors for the twelve months ended June 30th states that, although the profits are considerably in excess of those of the previous year, they are not so large as they would have been, had it not been for exceptional circumstances which prevailed during the year. In view of these, the directors deemed it advisable, as a matter of policy, to accept certain special contracts, in order to safeguard the position of the company. This policy has justified itself, the result being that the company is now in possession of large contracts, running from the present time until the end of the year 1899, under advantageous terms, with practically every large user of its products in England. The accounts show a gross profit of £17,189. for the financial year. This sum, together with £1,447. brought forward from last year, less the amount of £1,157., which remained to be written off the expenses of issuing the new debenture stock, leaves a balance of £6,938., after providing for debenture interest of £3,825., and fixed charges. The directors recommend the payment of a dividend of 10 per cent. for the year on the "A" shares, which will absorb £6,000., leaving the sum of £938. to be carried forward. In view of the large reserve fund in shares held by the company and the creation of a general reserve fund, together with the fact that upwards of £3,000. has been expended in maintenance of the works, which otherwise would have been added to profit, the directors are of opinion that there is no occasion for writing off anything for depreciation. The lawsuits which have been carried on both in England and on the Continent have now been compromised, and the terms of agreement made with former competitors prevents further competition, and in all other respects are satisfactory to this company. An arrangement has been made with one of the most prominent chemical firms in Germany for the joint formation of a German company, which will acquire the various German patents of this company, and works are now in course of erection at Rheinfelden, to carry out the same processes at present worked at Oldbury. These works are expected to be in operation by January 1st, and as the output is already largely sold ahead, the profits of this subsidiary company will substantially augment the income of this company. The other undertakings in which this company is interested are making satisfactory progress. At the last meeting of the Castner-Kellner Alkali Co., Ltd., it was announced that an interim dividend at the rate of 8 per cent. per annum might be expected in October. A dividend at this rate upon the shares held by this company in that undertaking would alone mean almost 10 per cent. upon its share capital. This would be an entirely new source of revenue. The Niagara works of the Mathieson Alkali Co. have been in full operation since last November, with, it is understood, most satisfactory results, and the royalty of £4,000. per annum is being paid. The Niagara Electro-Chemical Co. has paid a dividend of 5 per cent. for the year. A much larger dividend could have been declared; but it being the first year of that company's existence, it was deemed advisable to employ a large sum out of the profits to write down its capital.

DIVIDENDS.

SALAR DEL CARMEN NITRATE SYNDICATE, LTD.—The directors have resolved to pay an interim dividend of 2s. 6d. per share, payable on September 10th.

THE HARTLEPOOLS PULP AND PAPER CO., LTD.—The report of the directors for the six months ended July 31st, 1898, shews that after setting aside £1,500. for depreciation, and after including the £821. brought forward from the last half year, the balance of profit available for disposal is £4,375., out of which the directors recommend the payment of a dividend at the rate of 10 per cent. per annum, absorbing £2,500., the placing of £1,000. to the reserve fund, and the carrying forward of the balance (£875) to next account.

PATENT LAW LITIGATION.—Speaking on this subject the *Times* says: "The number of appeals heard before the Comptroller of Patents does not suggest the existence of great dissatisfaction with the working of our patent law. At the same time it is useless to deny that some persons, not to be dismissed as visionaries, are not content with the results described in this return, and would prefer something nearer the German or the American system. Patent agents in this country naturally assume that the easy conditions imposed here as to the granting of patents are the best for encouraging invention and promoting the progress of manufactures; and there is a temptation to dismiss as faddists all who do not recognise the perfection of the methods which happen to be in use among us. This is probably misleading. If there were appended to the Comptroller's return a statement of the litigation in regard to patents for 1897, the cost and the results, the report would not leave the impression that all was for the best in the interest of the true inventor and the public."

Trade Notes.

Another New Gas.—At a meeting in New York of the American Association for the Advancement of Science Mr. Charles Brush has made a preliminary announcement of the discovery of a new gas, a constituent of the atmosphere. Mr. Brush calls his new gas Etherion. He thinks it analysable into several gases, forming a periodic group of new elements.

Personal.—We learn that in future Mr. C. Harzer, of 79½, Gracechurch-street, London, E C., will represent the well-known firm of C. Heckmann, Berlin, whose distilling, rectifying, and vacuum apparatus, etc., enjoy a wide reputation. We believe the goods made by this firm are of the same high-class standard as the other goods (filterpresses, pumps, acid-proof enamelled ware, etc.) supplied by Mr. Harzer, and have no doubt that they will meet with the same success at his hands.

Proposed "Chemical" Works at Llandudno.—A meeting of the representatives of the interested local authorities was held at Conway on Monday, under the presidency of the Mayor, to consider what further steps should be taken to prevent the completion of the proposed chemical works at Llandudno Junction, which have recently been the subject of much hostile criticism in the public press. On the proposition of Dr. Pritchard, it was unanimously decided to recommend the Conway Rural Council to seek legal assistance, and prosecute the company for not depositing plans previous to proceeding with the erection of the building.

The Baku Petroleum Trade.—Within the last few weeks the price of crude oil at Baku has risen from 8¾ copecks to 10 copecks per pood, and sellers are now asking 10½ copecks. The Spanish-American war and the agitation in England with regard to the flash-point, have not yet affected the market in any way. Prices of kerosene have been practically stationary, with a downward tendency for many months, and it is only within the last few days that there has been a rise, in sympathy with crude oil and astatki. The bulk of the oil is used for factories on the Volga and railway and steamship companies, and the internal demand more than equals the supply, as is shown by present prices. The peculiar position of Baku on the Caspian Sea gives it practically the monopoly of the markets in the interior of Russia by ready and cheap means of transit over a vast industrial area. As many as 150 oil steamers are constantly engaged.

Copper at Natal.—At Natal, which has of late been coming to the front very rapidly as a coal-producing colony, a very extensive copper field has been discovered. Its width is about 700 feet, and its length ten or twelve miles. It is only seventy miles from the important centre of Dundee, and is approachable by a good road from that place, as well as from Eshowe. The reef is said to be a solid mass of rock, and in many places the whole width of the outcrop is visible. Samples of ore already assayed have yielded 50 per cent. of copper. Several prospecting licences have been issued by the Commissioner of Mines, and many areas have been pegged off. Already a considerable amount of English capital has been embarked on what promises to be a successful enterprise, one company having purchased a farm for £3,000., a deal which it intends to follow by taking up several areas in the Zululand reserve.

Institute of Chemistry: Examination in Therapeutics, Etc.—The Council desire to draw the attention of Fellows and Associates of the Institute of Chemistry, who are desirous of qualifying themselves for appointments as analysts under the Sale of Food and Drugs Acts, to the following regulations: For such appointments the qualifications of the Institute of Chemistry are accepted as satisfactory in so far as chemistry is concerned, and in order to meet the further requirements of the Local Government Board in regard to therapeutics, pharmacology, and microscopy, the Council have decided to establish an examination so that Fellows and Associates may be able to produce satisfactory evidence of a sufficient knowledge of these subjects. Such an examination will be held at the Laboratories of the Institute, 30, Bloomsbury-square, London, W.C., in October next. The examination will be open only to Fellows and Associates of the Institute of Chemistry, and candidates who have passed the final examination for the Associateship but are under the requisite age for election. The examination will include the following: The recognition of specimens of poisonous chemicals and crude drugs having well-marked physical characters, ordinarily found in commerce; the detection, by inspection or by means of the microscope, of adulterations, substitutions and impurities in such substances. Candidates will be required to show a general knowledge of the therapeutic effects of such chemicals and drugs, and of the quantities which, taken internally, would be injurious or fatal to man. Candidates desirous of presenting themselves, are required to apply on or before Saturday, the 1st day of October, 1898, on which day the list will be closed. The examination fee will be £2. 2s.

Obituary.—It will be with deep regret that the chemical world will learn of the death of Mr. Edward Rider Cook, senior partner in the firm of Edward Cook and Co., the well known soap and chemical manure manufacturers at Bow, and the representative of the Northern Division of West Ham in Parliament in 1885-6. The deceased gentleman was the eldest son of the late Mr. Edward Cook, of Crix, Hatfield Peveril, Essex, and was born in 1836. He was J.P. for Essex, Middlesex and London, and was a prominent member of the old Metropolitan Board of Works. He was a member of the Reform Club and National Liberal Club, and took an active part in the recent contest in the Walthamstow Division. He was president of the Society of Chemical Industry 1890-91, and acted as hon. treasurer of the Society since its formation.

Market Reports.

TAR AND AMMONIA PRODUCTS.

There is really nothing fresh to report in tar products. Benzols are unchanged. Carbolic acids and naphthas are quietly steady at recent quotations. Creosote is in fair demand. Pitch is quoted 25s. f.o.b. East Coast, but it is doubtful if any serious business has been done at the advance. There has been some speculative buying in tar. Anthracene nominal, with 30% A at 4d. and B 3d. to 3½d.

Sulphate of ammonia is a strong market, the article being scarce. Beckton price for Oct./Dec. is £9. 15s. Prompt prices are a shade weaker, with Beckton at £10. 5s. London outside makes £10. 5s.; Liverpool, £10. 2s. 6d.; Hull, £10. to £10. 2s. 6d.; and Leith £10. 2s. 6d. to £10. 3s. 9d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is quiet as a whole. Prices during the week have undergone little change, but the tendency seems to be rather to lower values. Bleaching powder is in more active demand for export, and prices are £5. 10s. to £5 15s. per ton f.o.b. Liverpool, according to brand; f.o.r. makers' works the quotation is £5. 2s. 6d. per ton. Some business reported done at this over 1899. Caustic soda is unchanged at last week's figures,—viz., f.o.b. Liverpool (10-ton lots), 77% £8. per ton; 74% £7. 15s; 70% £7. 2s. 6d., but lower prices are quoted for 1899 delivery. Alkali, 58%, is steady at £4. 2s 6d., bags, f.o.r. works, for home trade. For export trade a much lower price is accepted. Soda crystals and bicarbonate are in steady good demand and without change in price. Chlorate of potash 3¾d. per lb; chlorate of soda, 3½d. per lb. Saltcake firm at 25s. per ton. Sulphate of copper is steady at £16. 10s., f.o.b. Liverpool. Nitrate of soda is firmer at 7s. 6d. prompt and 7s. 9d. future delivery. Potash caustic is steady at £22. 10s. for 90%; carbonate of potash, 90%, £16 5s. per ton. Yellow prussiate of potash steady at 6¾d. to 6½d. Cyanide in good demand at 1s 1d. Sulphocyanides are quiet and somewhat lower in price. Acetate of lime (brown) is firmer at £5. to £5. 5s. c.i.f.; grey at £7. 5s. Acetate of soda steady at £12. nett c.i.f. White sugar of lead quiet, but price unaltered. Generally speaking there is only a light demand for chemicals from the manufacturing districts.

REPORT ON MANURE MATERIAL.

The market has been firm all round, and prices still tend in an upward direction.

Considerable sales of phosphate rock continue to be made on the Continent at full prices, but U.K. buyers, being well bought for the next manure season, are in no hurry to commit themselves to further purchases for later shipment.

There is good inquiry for East Indian bone meal, but prices recently accepted are now being declined. For autumn shipment £4. 10s. per ton is nearest value.

Nitrate of soda is very firm, and 7s. 7½d. per cwt. is nearest value for good quality. For refined 7s 9d. per cwt. is required.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 47s. 5d.; Middlesbro', 42s. 9d cash; and hematite, 52s. 11½d. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed at £52. 0s. 0d. to £52. 5s. 0d. cash, and £52. 3s. 9d. to £52. 8s. 9d. three months. Tin quiet: Straits closed at £73. 17s. 6d. to £74. 7s. 6d. cash, and £74 1s 3d. to £74. 11s. 3d. three months; Australian, £74. 12s. 6d; English ingots, £77. to £77. 5s. Lead steady: Spanish, £12. 15s. 0d. to £12. 16s. 3d., English, £12. 18s. 9d.; Silesian spelter, ordinary, £20. 12s. 6d. to £20. 15s. Nickel, 1s. 2½d. Antimony, £37. to £37. 10s. Quicksilver: First hands, £7. 12s. 6d.; second hands, £7. 12s. *Copper shares* quiet: Cape, 4⅜ to 4¾;

po, 2⅞ to 2⅞; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅝ to Rio Tinto, 28⅞ to 29; Tharsis, 6½ to 6¾.

ASGOW, Wednesday.—Market steady, and a good business; 1 done at 47s. 5½d., 47s. 6d., and 47s. 5d. cash; also at 8d., 47s. 8½d., and 47s. 7½d. month; buyers, 47s. 5d. sellers, ½d. more. Cleveland done at 42s. 10d. five days, and)d. to 43s. month; buyers, 42s. 9d. cash; sellers, 42s. 10d. erland hematite done at 53s. 3½d. and 53s. 2½d. month; buyers, 1½d. cash; sellers, 53s. Middlesbrough hematite, buyers, 52s. 6d. sellers, 52s. 9d.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

LS.—Palm oil is steady and selling satisfactorily, Lagos having done at £20. 5s transit. Olive is strong, with prices on the ce. Linseed is steady at 18s. to 18s 6d. for Liverpool makes in casks. Cottonseed is firm at 16s. to 16s. 3d. per cwt. for Liverrefined. Castor oil is in moderate request; sellers offer good ds Calcutta at 3¼d. and Madras at 3d. to 3 1/16d., while sales of ressure French have been made at 3 1/16d. per lb. Tallow is slow e, but so far there has been no change in prices. Resin is selling on spot without change in quotations. Spirits of turpentine are steady at 22s. 9d. cwt. with moderate sales thereat. Petroleum at 5d. for Russian and 5 5/16d. to 7¼d. per gallon for American.

KES.—Owing to the firmer advices prices of American Western d on the spot are the turn in sellers' favour at £5. 15s. to 2s 6d., with business passing thereat; whilst transactions in pool makes have only been made to a very moderate extent at ous currencies, viz., £7. to £8. per ton, according to brand. ican decorticated cottonseed have a steady market and values are nged, with business at £5. 5s. to £5. 15s. according to quality, Liverpool makes are selling slowly at £5. 15s. to £6. 10s. per ccording to brand. The demand for Liverpool undecorticated s was only on a small consumptive scale at former rates, but rs remained steady at £3. 15s. to £4. 5s. per ton, according to . Spot parcels of Egyptian are still quoted at £3. 15s. per ton, here is not much business passing in the moment.

LOURS.—Prices are steady, and practically without change. s: Oxfordshire—common £10., medium £12, best £15; rshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; ds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; h, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red nchanged. Venetian red: £6. to £10. Cobalt: Prepared , 9s 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; im, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

last week sulphate of ammonia retained its upward tendency well, efore the close £10 2s 6d. had been paid for prompt f.o.b. Leith. week, the feeling remains a firm one, though certainly an early ion is looked for by some. To-day the price is still well held. te of soda also has improved. General chemicals are for the most idle, and the manufacture in some of the lines is seriously affected e prevailing high temperatures. Sulphate of copper is slightly r, but in most of the other cases the tendency is rather to the fall. outlook on the mineral oil and paraffin manufacture continues in cent bitterness. Burning oil is well sold over the season at the ng advance (the figure given below), and one or two of the makers isposed to exact another farthing for any fresh business.

ief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett., soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. Glasgow; caustic soda, white, 74° £7. 15s. 0d. 70/72° s. 6d., 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liver- bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 25s. 0d.; , English refined, £13. 10s., and boracic acid, £25 nett, Glasgow; bonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s. Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and ish deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate da, 2¾d. less 3½%, for Scotch and English deliveries (for export, nett, f.o.b. Glasgow); chlorate of potash, 3½d. less 5%, Liverpool; te of soda, 7s. 7½d. to 7s. 9d; sulphate of ammonia, £10. 2s. 6d. pt, f.o.b. Leith; salammoniac, first and second white, £35. and nett, any port; sulphate of copper, £16. 12s. 6d. less 5% Liver-; paraffin scale, hard, 1⅜d. to 1½d. per lb., soft, 1½d per lb.; fin wax, 120° semi-refined, 1¼d. to 2d. per lb; paraffin spirit atha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 6d., rystal, 6¼d., at Glasgow and other big centres, for Scotch buyers lish sales a shade lower); ditto (lubricating) 865° £4. 10s. to os., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. 's imports of sugar at Greenock were 33,148 bags beet unrefined.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The little improvement recorded in linseed oil last week has been fully maintained, but so much can hardly be said of refined cotton oil which closes a trifle easier. The imports to date against the same time a year ago are not altogether satisfactory, especially when taken in conjunction with the manufactured articles such as oil and cake, which each show an increase:—Wheat, 1,850,622 qrs. against 1,456,152 qrs; linseed, 233,616 qrs. against 407,335 qrs.; rapeseed, 52,586 qrs. against 56,986 qrs.; cottonseed, 121,147 tons against 127,458 tons; oilcake, 8,803 tons against 7,123 tons; olive oil, 4,148 tuns against 3,289 tuns; tar, 1,014 barrels against 3,289 barrels. Linseed oil, is quiet and quoted 16s., naked, spot; 15s. 9d., September, and 15s. September/December. Boiled and refined, £1. to £1. 10s. per ton, extra. Refined cotton oil quiet, and quoted 13s. 10½d., spot, naked, and 13s. 4½d. Nov./April, sellers, whilst crude ditto is quoted 12s. 9d., spot, naked. Olive oil is quoted from £30. per tun. Castor oil, extracted here, £28 10s. per ton in barrels; first pressure in cases 3 3/16d. per lb.; second pressure, £27. 10s. in barrels, and 3 1/16d. per lb in cases. Olive oil soaps unchanged. Cod oils, £16. to £18 per ton. Tallow very scarce, refined engine being quoted £21. per ton. Resins unchanged. Yorkshire grease, £7. 10s. to £9 per ton. Danish butter, 97s per cwt.; Swedish, 97s; Dutch, 94s.; Canadian, 84s.

CAKES.—The mills here are only working a few days each week, but prices remain firm. Linseed cakes, 95% pure, £7. 7s 6d. to £7. 10s. per ton. Oilcakes (linseed), £6. 7s. 6d. to £6. 10s.; Russians, £6. 17s 6d. to £7.; Americans, £6. 10s. to £6. 12s. 6d. Cotton cakes steady; best makes, £4. to £4. 2s. 6d.; seconds, £3. 16s. 3d. £3. 17s. 6d. Decorticated, £6. to £6. 1s 3d. Rape cakes scarce, Black Sea, £4 2s. 6d. per ton.

PAINTS.—Makers are fairly well employed, with no change of values. Disinfectant manufacturers continue well employed. Powder being quoted from £4. 10s. for 20%. Carbolic sanitary fluid from 1cd. per gallon. Black varnish, £5 10s. per ton.

TYNE CHEMICAL REPORT.

TUESDAY.

There is no change to report in the local chemical trade, and the market is dull and business slow. Prices remain unaltered. Caustic, 76/77%, £8. per ton; 70%, £7 5s. per ton. Soda crystals, £2. 12s. 6d. per ton, gross weight, locally. Sulphur steady at £5. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett: do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8 to £8. 5s. and 70% £7. 5s. to £7. 10s. per ton, nett; recovered sulphur, 2 cwt bags, £5 0s per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. per ton nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT continues steady with fair shipments at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Market continues very firm and prices, if anything, are stronger. Small steam coals are in strong demand and sales have been made to-day at 8s. 6d. per ton. Coke in good inquiry at 18s. 6d. to 21s. per ton according to quality. Best Northumbrian steam, 14s. to 15s. per ton; second qualities, 13s. to 14s. per ton; small steam, 8s. 6d. to 9s. per ton; bunker coals, 10s. to 11s. per ton; gas coals, 10s. 6d. to 11s. 6d. per ton; coke, 18s. 6d. to 21s. per ton.

New Companies.

Bagnall Oil Co., Ltd.—CAPITAL £200,000. in £1. shares. This company has been formed to acquire the business carried on at Red Bank Oil Works, Ship Canal Docks, Manchester, and elsewhere, as Bagnall and Company, and to carry on the business of producers, refiners, storers, suppliers, distributors of, and dealers in, petroleum and other oils and their residual products, manufacturing and general chemists, druggists, etc. The subscribers to the memorandum of association are:—Mrs. A. A. M. Bagnall, Aspenshaw Hall, Birch Vale, Derby; W. G. Bagnall, Aspenshaw Hall, Birch Vale, oil merchant; F. H. Bagnall, Old Trafford, Manchester, oil merchant; Miss B. A. Bagnall, Aspenshaw Hall, Birch Vale, Derby; Miss B. M. Bagnall, Aspenshaw Hall, Birch Vale, Derby; Miss A. G. Bagnall, Aspenshaw

Hall, Birch Vale, Derby; E. H. Bagnall, B.Sc., Aspenshaw Hall, Derby. Registered office, Red Bank Oil Works, Ship Canal Docks, Manchester.

Gas & Sulphate Producer Ltd.—Capital £30,000. in £1. shares. This company has been formed to adopt an agreement with the Patent Oxide Syndicate, Ltd., and to carry on the business of a gasworks company, and of manufacturers of and dealers in chemicals, dye stuffs, and similar articles. The subscribers to the memorandum of association are:—P. J. J. Taylor, Manor House, Barnes, S.W., solicitor; F. R. Roberts, 6, Bickenhall Mansions, Gloster Place W., clerk; S. E. Newman, 72, Romilly-road, Finsbury Park, N., clerk; R Humphreys, 31, Digby-road, S Hackney, clerk; F. Merton, 53, Nunhead Grove, S.E., surveyor; C. C. Luff, Haven Park, Woking, clerk; E. Serrell, 50, Idmiston-road, Stratford, E, clerk. Registered office, 45, Market-street, Bermondsey.

Llewellyn Ryland, Ltd.—Capital £15,000. in 1,000 preference shares of £10. each, and 1,000 ordinary shares of £5. each. This company has been formed to acquire the business carried on by J. L Ryland, & J. W. Ryland at Birmingham as J Llewellyn Ryland, and to manufacture, sell, and deal in varnish, lacquer, paints, stains, colours, disinfectants, oils, etc. The subscribers to the memorandum of association are:—J. L. Ryland, Solihull Hall, Solihull, manufacturer; J. W. Ryland, Rowington, Warwick, manufacturer; A. H. Gibson, 39, Waterloo-street, Birmingham, chartered accountant; Mrs. J. W. Ryland, Rowington, Warwick; C Madely, Solihull, Warwick, engineer; G. W. Hickman, 33, Union-street, Birmingham, solicitor; W. B. Avery, Oakley Court, Windsor. Registered office, 24, Haden-street, Balsall Heath, Birmingham.

Robert Craig & Sons, Ltd.—Capital £200,000. in £10. shares. This company has been formed to acquire and carry on the business of Robert Craig & Sons, paper manufacturers, of Caldercruix and Moffat Mills, Lanarkshire. The subscribers to the memorandum of association are:—J. Craig, Moffat Mills, Airdrie, paper maker; R. Craig, Moffat Mills, Airdrie, paper maker; J. Craig, Moffat Mills, Airdrie, paper maker; C. Craig, Moffat Mills, Airdrie, paper maker; G. Wildridge, Moffat Mills, Airdrie, paper maker; J. Tennant, Moffat Mills, Airdrie, paper maker; C Tennant, Moffat Mills, Airdrie, paper maker. Registered office, Moffat Mills, Airdrie.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending August 13th.

Acetic Acid—		
Holland,	82 pks.	A. & M. Zimmermann
,,	110	R. W. Greeff & Co.
Acetone—		
Germany,	6 dms.	Petri Brs.
Acids—		
Holland,	114 pks.	Little & Johnston
Anhydrous Ammonia—		
Holland,	£10	H. Lorenz
Ammonium Nitrate—		
Germany,	£62	Petri Brs.
Antimony—		
Germany,	21 t.	Watson's Wf. Ld.
Antimony Ore—		
Germany,	10 t.	R. Warner & Co
Straits,	67	A. J. Henderson
France,	41	J. Bamber
U. States,	19	,,
Sweden,	40	G. Smith & Son
Asbestos—		
France,	£38	Mory & Co.
Germany,	40	Craven & Co.
Holland,	33	T. H. Lee
Italy,	272	W. Byford
Canada,	160	,,
,,	30	J. D. Hewitt & Co.
Italy,	85	W. Newbold
Barytes—		
Holland,	209 pks.	W. Harrison & Co.
,,	23	J. Graves
Belgium,	95	J. L. Lyon & Co
Bleaching Powder—		
France,	56 pks.	W. E. Cole
,,	56 cks.	J. M. Steel & Co.
Bone Meal—		
E. Indies,	300 t.	Fox, Roy & Co.
,,	407	A. Hunter & Co.
N. Russia,	50	Lawes Chemical Manure Co.
Bones—		
Sydney,	5 t.	Beresford & Co.
Brisbane,	6	Goad Rigg & Co.
Borax—		
,,	£30	A. & M. Zimmermann
Caoutchouc—		
Holland,	18 c.	Prop. Hay's Wf.
Straits,	891	L. & I. D. Jt. Co.
,,	325	Huttenbach & Co.
,,	200	Prop. Bull Wf.
,,	160	Anderson, Weber & Smith
Madagascar	39	Kleinwort, Sons & Co.
E. Indies,	90	Ralli Brs.
France,	74	Girard Brs. & Co.
Madagascar,	6	L. & I. D. Jt. Co.
Berbice,	486	,,
Straits,	82	Elkan & Co
Natal,	7	Hale & Son
W. Indies,	38	Anderson, Weber & Smith
Zanzibar,	49	L. & I. D. Jt. Co.
U. States,	185	Lewis & Peat
,,	25	Prop. Bul Wf.
Zanzibar,	10	Hale & Son
Aden,	15	Wallace Brs.
Straits,	554	E. Boustead & Co.
Castor Oil—		
Italy,	10 cs	L. & N. W. Ry. Co.
,,	5	L. & I. D. Jt. Co.
France,	35	F. Boehm
Italy,	25	W. T. Mills
,,	15	Stebbing & Co.
Chemicals (*otherwise undescribed*		
Holland,	£54	T H. Lee
Belgium,	19	John Cockerill Line
Germany,	17	Butler's Wf., Ld.
,,	800	A. & M. Zimmerman
U. States,	25	R. E Drummond & Co.
Belgium,	60	B. & F. Wf. Co.
Holland,	8	A. & M. Zimmermann
France,	71	Mory & Co.
,,	45	H. Ewald & Co.
Belgium,	64	T. Palmer
,,	10	C Atkins and Nisbet
Holland,	20	J. Owen
Belgium,	53	T. H. Lee
Brisbane,	180	L. & I D. Jt. Co.
Holland,	35	Hernu Peron & Co
Germany,	495	L. & I. D. Jt. Co.
Cream of Tartar—		
Portugal,	5 pks.	B. & F. Wf. Co.
France,	10	F. W. Turpin
Belgium,	3	T. Ronaldson & Co.
Italy,	56	B. Jacob & Sons
Spain,	10	B & F. Wf. Co
France,	10	,,
,,	1	H. Johnson & Sons
Disinfectants—		
Holland,	£40	A. C. Lloyd
Dyestuffs—		
Annatto		
Italy,	7 pks.	Melchers, Runge & Co.
Argols		
Italy,	602 pks.	B. Jacob & Sons
Cochineal		
Canaries,	25 pks.	W. M. Smith & Sons
,,	8	Sperling & Williams
Divi Divi		
E. Indies,	200 bgs.	H. J. Perlbach & Co.
Extracts		
Argntne.,	1,020 pks.	Darling Brs.
Denmark,	6	Sorensen & Co.
France,	686	T. H. Lee
,,	20	Bailey & Leetham Ld.
Gambier		
Straits,	450 bls.	G. R. Haller Ld.
,,	202 pks.	J. W. Cook & Co.
Indigo		
E. Indies,	4 chts.	Laughland, Mackay & Co
U. States,	1	Cotesworth & Powell
E. Indies,	19	Croysdale & Co.
,,	3	Walker, Munsie & Co.
,,	8	Parsons & Keith
,,	10	A. J. Keymer & Co.
,,	7	Arbuthnot, Latham & Co.
,,	30	Lewis & Peat
Myrabolams		
E. Indies,	3,969 pks.	W. Shelcott
,,	1,900 pkts.	P. & O. S. N .Co.
Saffron		
Spain,	1 pk.	Nichs. Wvs. Ld.
Shumac		
Italy,	100. pks.	L. & N. W. Rly. Co.
,,	25	150 Union L. Co., Ld.
Tanners' Bark		
Natal,	48 t.	A. & W. Nesbitt
U. States,	25	Anderson, Weber & Smith
Auckland,	9	Baxter & Hoare
Turmeric		
E. Indies,	540 pks. 270 bgs.	Henderson Brs.
,,	139	Leach & Co.
Valonia		
A. Turkey	25 t.	Deering & Robottom
,,	850	Boutcher, Mortimore & Co.
,,	16	A. & W. Nesbitt
,,	710	S. Barrow & Bro.
Dyestuffs (*otherwise undes. l—*		
France,	6 pks.	E. Flageollett & Co.
Denmark,	2	Tegner, Price & Co.
Farina—		
Germany,	100 pks.	R. Bennett & Co
,,	136	Humphrey & Co
,,	34	C. Tennant. Sons & Co.
Italy,	2,354	,,
France,	46	J. W Cook & Co.
Italy,	1,195	Wrightson & Son
Glucose—		
U States,	3,729 pks. 16,345 cwts.	R G. Hall & Co.
,,	631 651	Pearce, Pelly & Co
,,	2,500 2,500	Beck & Pollitzer
France,	100 100	Vokins & Co.
,,	600 600	Trier, Meyer & Co.
Germany,	103 103	,,
Canada,	4,250 4,250	R. G. Hall & Co.
,,	2,099 2,059	Pearce, Pelly & Co
,,	1,000 1,000	L. & I. D. Jt. Co.
,,	1 000 1,000	M. D. Co.
,,	3,000 3,000	E. Thompson & Co.
,,	500 500	Barrett Tagant & Co.
France,	800 800	W. E. Cole & Co.
Canada,	2,000 2,000	Beck & Pollitzer
U. States,	500 500	C. S. Lowell
Canada,	250 250	Trier, Meyer & Co.
U. States,	250 250	J. Barber & Co
,,	50 290	Fellows, Morton, & Co.
Canada,	500 500	C. Mongold & Co.
U. States,	1,000 1,000	L. & I. D. Jt. Co.
,,	50 287	C. & E. Morton
Glue—		
Belgium,	£460	J. Harrison
France,	11	Mory & Co
Holland,	8	Phillipps & Graves
U. States,	88	Armour & Co.
Germany,	185	Lesant & Co.
France,	35	W. J. Davies & Son
Germany,	600	Deering & Robottom
France,	210	D. Magnus
Holland,	52	T. H. Lee
,,	300	M. H. Vos
Italy,	150	Hicks, Nash & Co
Holland,	60	A. G. Robinson & Co.
Belgium,	1,875	J. Barber & Co.
Italy,	165	,,
Germany,	210	L. & I. D. Jt. Co.
Glue Stock—		
Germany,	176 bls.	W. Balchin, Ld.
France,	6	Schenker & Co.
,,	18	T. Trapp & Sons
Sydney,	12	Beresford & Co.
,,	114	Anning & Cobb
Germany,	46	Butler's Wf., Ld.
,,	46 sks.	L. & N. W Ry. Co.
Sydney,	13 bls.	Flack, Chandler, & Co.
U. States,	38	Baxter, Schenkelberger & Co.
Straits,	76	Beresford & Co.
,,	323 pcs.	W. France & Co. Ld.
Queensland,	24 bls.	T. J. & T. Powell
Germany,	106 bgs. 34 cs.	Hicks, Nash & Co.
Glycerine—		
Germany,	£75	R. W. Greeff & Co.
France,	20	J. W. Cook & Co.
,,	40	J. L. Lyon & Co.
Guano—		
Belgium,	173 t.	Anglo-Contl. Guano Wks.
Infusorial Earth—		
Germany,	£15	Craven & Co.
Magnesite—		
Germany,	£778	Deering & Robottom
Manure—		
——,	10 t.	F. W. Berk & Co., Ld.
Belgium,	3	T. Ronaldson & Co.
Methyl Alcohol—		
France,	2,290 glns.	E. J. Catlin
U. States,	100 brls.	J. Whaley
Belgium,	1 dm.	T. H. Lee
Mica—		
Ceylon,	£196	C. Davis & Co.
E. Indies,	35	G. W. Wheatley & Co.
Madras,	110	W. M. Smith & Sons
Bengal,	150	,,
Molasses—		
U. States,	100 brls. 600 c.	Sutro & Co.
,,	20 cs. 7	Beck & Pollitzer
,,	250 1,409	J. Forsey
Holland,	200 1,160	J. R. Francis
U. States,	500 2,400	A. B. Booth
,,	550 3 315	Seaward Brs.
,,	100 brls.	,,
Ochre—		
Holland,	1 pk.	Phillipps & Graves
,,	2 cks	,,
France,	106	J. L. Lyon & Co.
,,	21	W. Slimmon
,,	39 pks.	W. Harrison & Co.
Italy,	9	C. S. Lovell

Oxalic Acid—
Holland, 10 pks. R. W. Greeff & Co.
Paraffin Scale—
U. States, 831 brls. Anglo-American Oil Co., Ld.
" 146 Williams, Torrey, & Co.
" 173 Lon & Til. Ltge.
" 174 pks. 50 cs. C & D. Co.
Pearl Ash—
France, 120 c. F. W. Berk & Co., Ld.
Phosphate Rock—
France, 90 t. A. Hunter & Co.
Florida, 2,904 Fox, Roy, & Co.
Pitch—
Sweden, 220 brls. M. Dk. Co.
France, 48 cks. Poth, Hille, & Co.
Germany, 155 "
Russia, 340 Fellows, Morton, & Co.
U. States, 34 F. Garone
Plumbago—
Germany, 29 cks. W. Bridge & Son
" 30 B. Gallaway
Ceylon, 288 J. Forsey
" 1,461 Marshall & French
" 33 W. H. Sampson
" 120 Doulton & Co.
" 94 Perkins & Homer
" 142 R. G. Hall & Co
" 509 J. Thredder, Son, & Co
Germany, 60 brls. "
Belgium, 39 "
U. States, 3 cs. Lunham & Moore
Potash—
Holland, 44 cks. Hernu, Peron, & Co.
Potassium Bicarbonate—
Germany, 148 c. H. Lambert
Potassium Carbonate—
Germany, 200 c. C. Fox
" 100 R. W. Greeff & Co.
France, 140 W. E. Cole
Canada, 131 C. Fox
Potassium Cyanide—
Holland, 10 cs. T. Hamilton & Co.
" 20 W. Balchin, Ld.
France, 10 Burnett Brs. & Sons
Potassium Oxychloride—
Sweden, 280 pks. G. Boor & Co.
Potassium Prussiate—
Holland, 11 cks. Blagden, Waugh & Co.
Potassium Sulphate—
Germany, 308 bgs Anglo-Contl. Guano Works
Rosin—
Holland, 3 brls. J. Owen
U. States, 2,000 F. & S. Chiesman & Co.
Saltpetre—
Germany, 30 cks. J. Hall & Son, Ld.
E. Indies, 715 bgs. Perkins & Homer
Germany, 110 pks. P. Hecker & Co.
Soap—
Holland, £58 Phillipps & Graves
Germany, 3 Butler's Wf., Ld
U. States, 450 W. Dixon
" 174 Lunham & Moore
" 240 E. Fellingham
France, 17 Mory & Co.
Soda—
Germany, 100 c. Deering & Robottom
Starch—
Holland, 22 pks. Phillipps & Graves
Belgium, 632 T. H. Lee
France, 240 J. Barber & Co.
U. States, 300 Beck & Pollitzer
" 250 R. Bennett & Co.
Belgium, 282 T. Ronaldson & Co.
" 40 C. Tennant, Sons, & Co.
Holland, 840 A. Starck
Belgium, 519 F. Claydon & Co.
" 68 Leach & Co.
" 333 E. & T. Pink
Holland, 1,762 Little & Johnston
Stearine—
U. States, 3 cks. J. Goddart & Co.
" 130 L. & I. D. Jt. Co.
Belgium, 63 bgs. H. Hill & Sons
" 63 W. H Mitchell
France, 65 Beresford & Co.
Sulphur—
Italy, 8 t. J. Kitchin, Ld.
" 200 B. Jacob & Sons
" 300 Brandram Brs. & Co.
" 11 Nich's Wvs., Ld.
Talc—
France, £90 Blackwell & Co.
Tar—
N. Russia, 47 brls. Mordaunt Brs.
Tartaric Acid—
Holland, 18 pks. B. & F. Wf Co.
" 24 Kirkpatrick, Barr, & Co.
Ultramarine—
Holland 4 pks. W. Harrison & Co.
" 1 Taylor Brs.
" 4 D Storer & Sons
" 16 cks. Steinhoff, Sons, & Co.
Varnish—
Germany, 32 pks. L. & N.-W. R. Co.
U. States, 10 L. & I. D. Jt. Co.
E. Indies, 1 " "
Germany, 10 Phillipps & Graves
White Lead—
Belgium, 46 pks. T. & W. Farmiloe, Ld.
Germany, 15 Randall Brs.
Norway, 40 H. Lambert
Belgium, 18 G. E. Banes
" 19 J. L. Lyon & Co
" 87 D. Storer & Sons
Germany, 21 W. A. Rose & Co.
" 24 H. Lambert
Holland, 59 W. Balchin, Ld.
" 20 N. J. Fenner & Co.
" 21 J. Graves
Wood Pulp—
Sweden, 90 pks. Tough & Henderson
" 1,682 W. G. Taylor & Co.
" 250 H. Raby & Mather
Germany, 51 Christophersen & Co.
Norway, 1,350 Johnsen & Jorgensen
Holland, 54 C. S. Lovell
Norway, 4,590 London Paper Mills Co.
Sweden, 9,779 Henderson, Craig, & Co.
Canada, 2,900 "
Zinc Oxide—
Holland, 40 pks. M. Ashby, Ld.
U. States, 200 "
Germany, 50 D. Storer & Sons
Holland, 115 75 cks. J. Matton

LIVERPOOL.

Week ending August 11th.

Acetic Acid
Rotterdam, 5 brls. 17 blns.
Albumen—
Hamburg, 1 cs.
Aluminium—
New York, 8 bxs. F. Ashbury
Barytes—
Bremen, 100 bgs.
Bones—
Alexandira, 489 bgs.
Borax—
Valparaiso, 1,065 sks. A. S. Henry
Caoutchouc—
Valparaiso, 92 bls. J. H. Schroeder & Co.
Castor Oil—
Genoa, 5 cs. Calvert Brs.
" 10
Marseilles, 34 cks. 10
Caustic Potash—
Valparaiso, 16 sks A. Aramayo & Co.
Chemicals (*otherwise undescribed*)
Antwerp, 20 cks.
Hamburg, 10 cks. 5 cs.
Colours—
Hamburg, 83 cks. 2 cs.
Bremen, 4
Rotterdam, 134
Cream of Tartar—
Marseilles, 20 cks.
Bordeaux, 5
Dyestuffs—
Annatto
Bordeaux, 5 cks.
Argols
Oporto, 25 cks.
Canaigre
New Orleans, 250 sks. F. J. & J. Powell
Cutch
Singapore, 1 000 bxs.
Rangoon, 100
Divi Divi
San Domingo, 535 bgs. Frams, Alston & Co
Extracts
New York, 125 brls. McArcher & Co.
Fiume, 260 De Clermont & Donner
" 272 E. J. Gutman
Halifax, 55 Boutcher, Bacon & Co.
Philadelphia, 100 bxs.
Hamburg, 20 cs.
Ghent, 10 brls.
Fustic
Tampico, 3,898 pcs.
Hamburg, 970
Gambier
Singapore, 6,271 bls 91 bgs.
Myraboiams
Bombay, 1,300 bgs. Okell & Owens
Orchella
San Francisco, 803 bls.
Valonia
Syra, 521 bgs. L Vusunaraso & Co
Smyrna, 2 t. G. Essayan & Co.
" 207 20
Glucose—
Boston, 2 brls.
New York, 199
Glue—
Fiume, 200 sks. Ihlee & Sankey
Rotterdam, 200 bgs. 35 cs. 6 cks.
Lithopone—
Rotterdam, 40 cks.
Manganese Ore—
Kobe, 300 t.
Coquimbo, 1,909
Molasses—
N. Orleans, 2,745 brls.
Ochre—
Marseilles, 50 cks.
Paint—
Boston, 10 cs. Bahr, Behrend & Ross
Phosphate Rock—
Punta Gorda, 3,100 t
Coosaw S. C. 2,238 West & Penrose
Phosphates—
Ghent, 120 t.
Pitch—
Marseilles, 57 cks.
Potassium Chlorate—
Marseilles, 10 brls.
Pyrites—
Huelva, 6,395 t. Matheson & Co.
" 1,125 H. Bath & Son
Rosin—
New York, 1 031 brls.
N. Orleans, 2 cs. E. Brumin & Co.
Salt—
Philadelphia, 50 cs.
Saltpetre—
Karachi, 132 bgs.
Soap—
Hamburg, 1 cs.
Boston, 40
" 10 J. Thompson
Marseilles, 5 G. G. Mackay
Bombay, 100 bxs. Okell & Owen
Marseilles, 193 8 cs.
N. Orleans, 911 brls.
Soap Lye—
Marseilles, 4 dms.
Soap Stock—
New York, 100 brls.
Soapstone—
Genoa, 200 bgs. W. Harrison & Co.
Bordeaux, 200
Soda Ash—
New York, 280 bgs.
Sodium Bichromate—
Hamburg, 26 cks.
Sodium Sulphate—
Boston, 30 brls G. Warren & Co
Starch—
Antwerp, 66 cs. J. T. Fletcher & Co.
" 120
New York, 50 brls. J. Armstrong & Co., Ld.
Rotterdam, 60 bgs. Browne, Geveke & Co.
" 30 cs.
Stearine—
New York, 5 bds.
Antwerp, 52 bgs.
Sulphur Oil—
Leghorn, 12 brls.
Bari, 69
Talc—
Fiume, 100 sks.
Tallow—
Boston, 500 tcs. Cuthbert & Hall
" 183
Philadelphia, 220
Turpentine—
Savannah 6,174 cks.
Varnish—
New York, 4 brls. W. A. Warren
Waste Salt—
Hamburg, qty. 310 t. 103 bgs.
Wood Pulp—
Boston, 169 bls.
Rotterdam, 12 pks.
Gothenburg, 16 bls. Bahr, Behrend & Ross
" 20 F. Doherty
Zinc Ashes—
St. Petersburg, 34 cks.
Zinc Oxide—
Antwerp, 100 brls.
Hamburg, 25 cks.
Rotterdam, 20 cks.

MANCHESTER.

Week ending August 13th.

Alizarine—
Rotterdam, 45 cks 57 brls.
Alumina Oxide—
Hamburg, 1 ck.
Ammonia—
Rotterdam 25 cyldrs.
Ammonium Chloride—
Rotterdam, 5 cks.
Barytes—
Antwerp, 100 bgs.
Rotterdam, 150
Beta Naphthol—
Rotterdam, 6 cks.
Castor Oil—
Antwerp, 57 brls.
Cement—
Rotterdam, 10 bgs.
Chemicals (*otherwise undescribed*)
Hamburg, 10 cs.
Rotterdam, 2 cks.
Colours—
Hamburg, 3 cks.
Extracts—
Rotterdam, 14 cks.
Farina—
Stettin, 1,450 bgs. Browne, Geveke, & Co.
" 200
Felspar—
Christiania, 12 bgs.
Glucose—
Montreal, 200 brls.
Stettin, 350 cks.
Glue—
Rotterdam, 60 bgs.
Stettin, 20
Indigo—
Rotterdam, 3 brls.
Limestone—
Antwerp, 7 cs. J. T. Fletcher & Co.
" 3 14 crts.
Lithopone—
Rotterdam, 20 cks.
Ochre—
Rotterdam, 12 bgs. 8 cks. 1 cs.
Oxalic Acid—
Hamburg, 30 cks.
Stettin, 20
Pitch—
Hamburg, 7 bgs. 1 ck.
Potash Lye—
Hamburg, 32 dms.
Potassium Chlorate—
Gothenburg, 4 cks. 20 kgs.
Potassium Chloride—
Hamburg, 24 dms.
Soap—
Hamburg, 1 cs.
Rotterdam, 1
Sodium Silicate—
Rotterdam, 4 cks.

Starch—
Antwerp, 822 cs.
Hamburg, 456
Rotterdam, 90
Tartaric Acid—
Rotterdam, 21 cks.
Toluidine—
Antwerp, 10 cks.
Ultramarine—
Hamburg, 2 cks.
Rotterdam, 2 cs.
Waste Salt—
Hamburg, 1,100 bgs. and qty.
White Lead—
Rotterdam, 12 cks.
Wood Pulp—
Christiania, 2,460 bls. W. H. Ingram
" 1,705
Drammen, 4,595
Gothenburg, 2,696
Hamburg, 4
Homelviken, 6,400
Montreal, 6,049 bdls. 2,445 rolls
Rotterdam, 162
Skien, 1,310 bls. W. H. Ingram
" 2,296
Stettin, 681 bdls.
Zinc Oxide—
Antwerp, 20 cks.
Rotterdam, 40 / 60 brls.
Zinc White—
Rotterdam, 67 cks.

HULL.

Week ending August 13th.

Albumen—
Riga, 1 ck.
Asbestos—
Copenhagen, 627 bgs. Theilman & Co.
Barytes—
Antwerp, 71 cks. H. F. Pudsey
Bremen, 29
Rotterdam, 1 Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Antwerp, 145 pks. Wilson, Sons, & Co., Ld.
Bremen, 3 cs. J. Pyefinch & Co.
Ghent, 16 crbys. Wilson, Sons, & Co., Ld.
Hamburg, 4 brls. / 6 cks. "
" 1 Bailey & Leetham, Ld.
Colours—
Amsterdam, 1 ck. Hull & Netherlands S. S. Co
Antwerp, 13 pks. Wilson, Sons, & Co., Ld.
Bremen, 3 cs. J. Pyefinch & Co.
Dunkirk, 8 pks. Wilson, Sons, & Co., Ld.
Rotterdam, 3 cs. / 3 cks. "
" 37 pks. 4 bxs. / 137 cks. 2 brls. Hull & Netherlands S. S. Co.
Cryolite—
Copenhagen, 63 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 95 pks. Hull & Netherlands S. S. Co.
Indigo
Rotterdam, 5 brls. Hull & Netherlands S. S. Co.
Logwood
Hamburg, 40 bgs. Wilson, Sons, & Co., Ld.
Dyestuffs *(otherwise undescribed)*
Antwerp, 400 bgs. Wilson, Sons, & Co., Ld.
Farina—
Ghent, 20 bgs. Wilson, Sons, & Co., Ld.
Stettin, 150 "
Glucose—
New York, 1,450 brls. Wilson, Sons, & Co., Ld.
Glue—
Christiania, 100 bgs. Wilson, Sons, & Co., Ld.
Dunkirk, 32 cks. "
Hamburg, 20 "
Rouen, 10 pks. / 10 bls. / 29 cks. Rawson & Robinson
Glue Stock—
Dunkirk, 27 bls. Wilson, Sons, & Co., Ld.
Hamburg, 7 "
Lithopone—
Rotterdam, 20 cks. Hull & Netherlands S. S. Co.
Naphtha—
New York, 2,000 brls. Anglo-American Oil Co.
Naphthaline—
Hamburg, 10 cks. Wilson, Sons, & Co., Ld.
Ochre—
Bremen, 129 bgs. Sissons Brs. & Co.
" 8 cks.
Paraffin Wax—
New York, 45 brls.
Phosphate Rock—
Bona, 1,975 t.
Plumbago—
Hamburg, 65 cs. Wilson, Sons, & Co., Ld.
Rosin—
Bordeaux, 13 cks.
Saltpetre—
Hamburg, 225 bgs. Wilson, Sons, & Co., Ld.
Soap—
New York, 700 bxs.
Soda—
Antwerp, 100 bgs. Wilson, Sons, & Co., Ld.
Ghent, 400 "
Rotterdam, 6 dms. Hull & Netherlands S. S. Co.
Sodium Sulphide—
Amsterdam, 2 dms. Hull & Netherlands S. S. Co.
Starch—
Antwerp, 360 cs. Wilson, Sons, & Co., Ld.
Bremen, 1,278 Veltmann & Co.
Ghent, 172 Wilson, Sons, & Co., Ld.
Stearine—
Aalesund, 1 ck. Wilson, Sons, & Co., Ld.
Antwerp, 63 bgs. "
New York, 25 cs. "
Tallow—
Antwerp, 10 pks. Wilson, Sons, & Co., Ld.
Dunkirk, 186 cks. "
New York, 90 tcs. "
Tartar—
Bordeaux, 10 cks.
Tartaric Acid—
Rotterdam, 8 cks. Hull & Netherlands S. S. Co.
Turpentine—
Bordeaux, 2 cks.
Libau, 49 brls.
Ultramarine—
Rotterdam, 22 cks. Hull & Netherlands S. S. Co.
White Lead—
Antwerp, 53 cks. Bailey & Leetham, Ld.
Amsterdam, 23 Hull & Netherlands S. S. Co.
Rotterdam, 40 "
Wood Pulp—
Boston, 588 bdls. Wilson, Sons, & Co., Ld.
Christiania, 2081 bls. / 70 pks. "
Drontheim, 480 bls. "
Gothenburg, 168 "
Hango, 6 J. Good & Sons
Helsingfors, 279 "
Zinc Ashes—
Antwerp, 6 cks. Bailey & Leetham, Ld.
Zinc White—
Amsterdam, 40 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending August 18th.

Arachide Oil—
Rotterdam, 1 csk. J. Rankine & Son
Asbestos—
Montreal, 300 bgs.
Barium Sulphate—
Antwerp, 250 bgs.
Barytes—
Rotterdam, 115 cks. J. Rankine & Son
Hamburg, 56 / 40 bgs.
Bitumen—
Marseilles, 4 cks.
Castor Oil—
Antwerp, 56 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 2 cs.
Colours—
Hamburg, 1 ck.
Rotterdam, 3 41 brls. / 31 pks. 3 bxs. 1 cs. J. Rankine & Son
Dyestuffs—
Alizarine
Rotterdam, 27 cks 1 bx. J. Rankine & Son
Aniline
Rotterdam, 8 cs. J. Rankine & Son
Amsterdam, 2 cks. "
Extracts
Antwerp, 1 cks.
Indigo
Amsterdam, 1 cht. J. Rankine & Son
Dyestuffs *(otherwise undescribed)*
B. Ayres, 270 t.
Farina—
Delfszyhl, 475 bgs.
Glucose—
New York, 1,050 brls.
Glue—
Rouen, 56 cks.
Antwerp, 15
Hamburg, 40 bgs.
Rotterdam, 20 J. Rankine & Son
Linseed Oil—
Amsterdam, 60 brls.
Ochre—
Rotterdam, 17 cks. J. Rankine & Son
Rouen, 5
Paint—
New York, 20 kgs. 1 bx. 1 brl.
Paraffin Scale—
Rangoon, 829 cs.
Phosphate—
B. Ayres, 1,870 t. A. Cross & Son
Potassium Carbonate—
Hamburg, 20 cks.
Potassium Prussiate—
Amsterdam, 4 cks.
Saltpetre—
Hamburg, 40 kgs.
Soap—
Marseilles, 10 bxs. 4 cs.
Soap Lye—
Marseilles, 6 drms.
Sodium Nitrate—
Iquique, 12,878 bgs. Alex. Cross & Sons
Starch—
New York, 200 bgs. 320 sks.
Rotterdam, 43 cs. J. Rankine & Son
Antwerp, 900 cs.
Stearine—
Amsterdam, 63 bgs.
Tallow—
Philadelphia, 294 tcs.
New York, 3
Rotterdam, 12 cks. 80 trcs. J. Rankine & Son
Tar Waste—
Rotterdam, 1 ck. J. Rankine & Son
Ultramarine—
Rotterdam, 4 cks. 3 cs. J. Rankine & Son
Varnish—
New York, 23 brls. 1 bx.
Waste Salt—
Hamburg, 100 t.
White Lead—
Rotterdam, 82 cks. 7 pks. J. Rankine & Son
Wood Pulp—
Rotterdam, 50 bls. 160 pks. J. Rankine & Son
Montreal, 5 760 bdls.
Christiania, 2,258 bls. 106 cs.
Zinc Oxide—
New York, 100 brls.
Antwerp, 25 cks.
Zinc White—
Rotterdam, 5 pks. J. Rankine & Son

TYNE.

Week ending August 13th.

Barytes—
Antwerp, 200 bgs. Tyne S. S. Co.
Chemicals *(otherwise undescribed)*
Rotterdam, 20 tins Tyne S. S. Co.
Colours—
Antwerp, 6 cks. Tyne S. S. Co.
Hamburg, 13 1 cs. "
Glue—
Antwerp, 2 cks. Tyne S. S. Co.
Limestone—
Antwerp, 8 crts. Tyne S. S. Co.
Phosphates—
Antwerp, 300 t. Langdale's Chemical M. Co.
Plumbago—
Hamburg, 5 cks. Tyne S. S. Co.
Pyrites—
Huelva, 2,899 t. Tharsis Sulphur & Copper Co.
Soap—
Rotterdam, 2 cs. Tyne S. S. Co.
Starch—
Rotterdam, 26 cs. Tyne S. S. Co.
Stearine—
Rotterdam, 14 bgs. Tyne S. S. Co.
Zinc Oxide—
Antwerp, 20 brls.

GOOLE.

Week ending August 10th.

Alizarine—
Rotterdam, 137 cks. 1 cs.
Aniline—
Rotterdam, 320 cks. 53 cs.
Aniline Colours—
Rotterdam, 98 brls. 27 cs.
Antimony—
Boulogne, 2 cks.
Barytes—
Antwerp, 200 bgs. / 18 cks.
Caoutchouc—
Boulogne, 2 bgs. / 4 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 1 ck.
Colours—
Hamburg, 3 cks. 9 cs.
Dyestuffs *(otherwise undescribed)*
Amsterdam, 1 cs.
Antwerp, 624 bgs.
Boulogne, 111 pks.
Ghent, 144
Extracts—
Amsterdam, 10 cks.
Dunkirk, 150
Farina—
Hamburg, 100 bgs.
Glue—
Antwerp, 10 cks.
Rotterdam, 20 bgs.
Indigo—
Rotterdam, 5 brls.
Lead Acetate—
Hamburg, 17 cks.
Logwood—
Hamburg, 18 t.
Potash—
Antwerp, 4 cks. 20 dms.
Dunkirk, 6 60
Salt—
Hamburg, 200 t.
Saltpetre—
Hamburg, 9 brls.
Rotterdam, 100 bgs.
Waste Salt—
Hamburg, 210 t. / 152 cks. / 500 bgs.
Wood Pulp—
Rotterdam, 50 bls.

GRIMSBY.

Week ending August 13th.

Albumen—
Hamburg, 7 cks.

Barytes—
Hamburg, 20 cks.

Caoutchouc—
Antwerp, 6 cs.
Hamburg, 4
Rotterdam, 2

Chemicals *(otherwise undescribed)*
Hamburg, 5 cks. 20 tins

Colours—
Antwerp, 11 cks. 50 pks.

Dieppe, 6 cs.
Hamburg, 22 18 10
Rotterdam, 6

Dyestuffs *(otherwise undescribed)*
Dieppe, 2 cks.

Pitch—
Dieppe, 10 cs.

Size—
Antwerp, 2 cks.
Rotterdam, 1

Starch—
Antwerp, 190 cks.

Wood Pulp—
Malmo, 80 bgs.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 17th.

Alkali—
New York, 9 t. 7 c. £128

Ammonium Carbonate—
Sydney, 15 cs. £22
Melbourne, 10 c. 12
Adelaide, 5 11
Rouen, 5 t. 10 135

Ammonium Chloride—
St. Petersburg, 2 t. £46
Sydney, 11 1 c. 209
Varna, 18 26
Hamburg, 1 31
Amsterdam, 6 10
Melbourne, 6 17

Ammonium Sulphate—
Madeira, 20 t. 9 c. £210
Mauritius, 50 481
Antwerp, 139 1,160
Bremen, 50 480
Hamburg, 230 2,165

Bleaching Powder—
Cape Town, 1 t. 2 c. £10
E. London, 10 5

Borax—
Nagasaki, 1 t. £25
Melbourne, 30 kgs. 1 tk. 51

Carbonic Acid Gas—
Channel Is., 62 tubes £23

Caustic Soda—
Wanganui, 5 c. £11
Melbourne, 10 t. 13 103
Wellington, 4 19 40

Chemicals *(otherwise undescribed)*
Jamaica, 7 cs. £36
Madras 31 14
Gibraltar, 9 pks. 30
Amsterdam, 1 ck. 5 kgs. 45
Brussels, 6 35
Rotterdam, 27 pks. 275
Sydney, 3 cs. 28
Brisbane, 133 53
Malaga, 3 39
Montreal, 16 dms. 26
Dusseldorf, 40 pks. 85
Wellington, 30 208
Perth, 25 39

Citric Acid—
Suakim, 2 cs. £17
Colombo, 1 ck. 7
Rangoon, 2 12
Lisbon, 10 cks. 68
Calcutta, 2 27
Amsterdam, 6 c. 35
Pt. Elizabeth, 1 cs. 5
Cape Town, 5 kgs. 26
Sydney, 40 226
Bluff, 2 c. 13
Beira, 1 6
Durban, 3 20
Brisbane, 2 13
Wellington, 1 7

Coal Products—
Alizarine
Dunedin, 6 cks. £90
Lyttelton, 3 30
Aniline
Sydney, 1 cs. £8
Anthracene
Gothenburg, 250 cks. 250 brls. £374
Cologne, 412 1,524
Benzol
New York, 20 cks. £128
Boulogne, 50 brls. 165
Treport, 48 124
Cape Town, 5 dms. 8
Carbolic Acid
Melbourne, 5 cs. £6
Calcutta, 20 dms. 7
Rotterdam, 48 cks. 200
St. Petersburg, 29 170
Montreal, 5 10
Creosote
Huelva, 2,400 brls. £1,320
Naphthaline
Bordeaux, 51 bgs. £29
Calcutta, 20 cks. 12

Pitch
Alexandria, 200 brls. £67
Antwerp, 140 t. 173
Huelva, 450 461
Boston, 500 cks. 258
Melbourne, 10 7
Montreal, 280 55
Philadelphia, 250 80
Tar
Hamburg, 100 cks. 250 brls. £168
Madras, 25 runlets 19

Copperas—
Rabat, 5 t. 5 c. £15

Copper Sulphate—
Paris, 4 t. 4 c. £70
Launceton, 2 10 41

Cream of Tartar—
Adelaide, 5 c. £21
Launceton, 1 t. 74
Sydney, 1 75

Disinfectants—
Jamaica, 91 pks. £100
Sydney, 136 114 cs. 204
Melbourne, 53 24 130
Trinidad, 75 104
E. London, 17 49
Brisbane, 11 10

Glycerine—
New York, 25 t. 19 c. £587
Rotterdam, 9 14 235

Hydrofluoric Acid—
Hong Kong, 2 cs. £22

Manure—
Rouen, 65 t. £325
Riga, 101 4 c. 230
Jamaica, 23 160
Jersey, 90 261
Madeira, 30 13 110
Treport, 25 75
Dunkirk, 20 1 136
Chinde, 25 65
Colombo, 50 350

Oxalic Acid—
Adelaide, 14 c. £22

Oxygen—
Hamburg, 5 cylndrs. £25

Phosphates—
Wellington, 40 t. £110

Phosphorus—
Lisbon, 6 cs. £57
Teneriffe, 2 20
Sydney, 23 180

Potash—
Melbourne, 14 c. £35
Brussels, 5 35
Fremantle, 11 60

Potash Salts—
Auckland, 13 t. 6 c. £1,097

Potassium Bicarbonate—
Philadelphia, 2 t. 7 c. £62

Potassium Bichromate—
Rotterdam, 1 t. 3 c. £36

Potassium Carbonate—
Sydney, 10 c. £12

Potassium Cyanide—
Melbourne, 6 t. 7 c. £770
Sydney, 20 cs. 214
Adelaide, 1 12 c. 200
Fremantle, 9 2 1,110
Durban, 5 513

Potassium Prussiate—
Durban, 2 c. £10
Montreal, 4 cks. 60

Potassium Sulphate—
Barbadoes, 30 t. 12 c. £292

Salt Cake—
Brussels, 140 t. £245

Saltpetre—
Melbourne, 3 t. £62
Gibraltar, 2 10 c. 52
Syra, 6 17 130

Sheep Dip—
E. London, 600 cs. £750
Pt. Elizabeth, 200 250
Sydney, 200 dms. 155
Cape Town, 200 250

Falkland Is., 120 cks. 100 799
B Ayres, 400 dms. 91

Soap Lye—
New York, 16 t. 6 c. £440

Soda—
Brisbane, 1 t. £6
Rotterdam, 5 9 c. 30
Beira, 1 2 7
Delagoa Bay, 12 8
Melbourne, 1 17
Boston, 4 8 60

Sodium Bicarbonate—
Auckland, 1 t. £6
Bluff, 1 7
Lyttelton, 2 15

Sulphuric Acid—
Beira, 40 cs. £20
Madras, 24 12

Superphosphates—
Mauritius, 248 t. 14 c. £1,197

Tartaric Acid—
Durban, 2 c. £14
Sydney, 2 t. 237
Calcutta, 3 17
Madras, 3 22
Boulogne, 5 30

LIVERPOOL.

Week ending August 17th.

Alkali—
Tripoli, 2 t. 3 c. 1 q. £10
Oporto, 13 10 55
Piræus, 16 4 63
Galatz, 5 2 20
Melbourne, 15 4 70
Valencia, 51 3 3 225
Malaga, 200 45
Quebec, 4 16 3 20
M. Video, 6 4 2 62
Lisbon, 10 3 1 40

Alum—
Ibrail, 4 t. £21
Sydney, 2 10
Syra, 8 10 c. 43
Melbourne, 1 5
Samos, 1 6 6
Rosario, 3 13 16
Bourgas, 4 4 20
Madras, 1 5
Casabalanca, 1 6 2 q. 6
Santa Catharina, 3 15

Aluminoferric—
Halifax, 1 t. 13 c. 2 q. £5

Aluminous Cake—
Calcutta, 50 t. 10 c. £116

Ammonium Carbonate—
Bourgas, 6 c. 1 q. £5
Copenhagen, 2 2
Genoa, 4 t. 10 84
Marseilles, 1 1 29
Naples, 4 5
Vera Cruz, 10 12
Hamburg, 1 33
Salonica, 3 16
Toronto, 4 5

Ammonium Chloride—
Piræus, 1 t. 6 c. 1 q. £52
Syra, 6 10
Salora, 4 7
Copenhagen, 1 1 17
Genoa, 16 3 27
Lisbon, 1 2 41
Odessa, 3 2 3 96
Montreal, 1 18 40

Ammonium Sulphate—
Nantes, 22 t. £240
Venice, 5 3 q. 40
Genoa, 46 15 c. 3 425
Malaga, 50 10 490
Valencia, 2 5 20
St. Louis, 50 14 489
Teneriffe, 2 20
Las Palmas, 50 15 510

Antimony Sulphide—
New York, 14 c £30

Arsenic—
Leghorn, 2 t. 3 q. £35
Rouen, 1 1 c. 20

Basic Slag—
Bordeaux, 154 t. 14 c. £239
Genoa, 50 84

Bisulphite of Lime—
Oporto, 2 cks. £7

Bleaching Powder—
Baltimore, 102 cks. 60 bxs.
Bilbao, 208 cs.
Chicago, 60
Everitt, 81 cks.
Genoa, 94
Leghorn, 31
Lisbon, 38
Montreal, 42
Nantes, 15
Newport News, 50
New York, 238 50 bxs.
Philadelphia, 135 cks.
Rio de Janeiro, 10 cs.
Sierra Leone, 2
Vera Cruz, 5 cks.
Valparaiso, 3

Boracic Acid—
Hamburg, 11 c. 3 q. £16

Borax—
Cape Town, 2 cks. £3
Trieste, 18 c. £15
Hamburg, 6 t. 6 c. 1 q. 82
Montreal, 2 18 2 44
Amsterdam, 1 10 12
Iquique 10 7
Stettin, 1 1 15
Wellington, N.Z., 1 2 3 17

Calcium Chloride—
Montreal, 10 t 1 c. £22

Calcium Sulphate—
Oporto, 50 t. £105

Carbolic Acid—
Hamburg, 5 t. 14 c. £45
Boston, 12 3 q. 44
New York, 15 cks. 120
Baltimore, 11 cs. 58
N. Orleans, 8 c. 3 85
Hong Kong, 6 1 10

Caustic Potash—
Baltimore, 3 t. 16 c. £96

Caustic Soda—
Acajutla, 30 dms.
Alexandria, 25
Antwerp, 15
Bahia, 90
Bari, 108
Beza, 70
Bilbao, 482 cs.
Bombay, 70
Brisbane, 3
Cape Town, 42
Catania, 35
Chicago 158 pks.
Dallas Texas, 60
Fiume, 30
Genoa, 50
Gibraltar, 24
Hiogo, 369
Lisbon, 15
Mauritius, 10
Messina, 25
Nantes, 36
Melbourne, Wf. 26
Naples, 43
Nassau, 14
New Orleans, 25
New York, 150 100 brls. 25 bxs.
Odessa, 275
Para, 6
Plasencia de Ca, 50
Puerto Cabello, 16
Santa Catharina, 30 35 cs.
Stamboul, 20
Sydney, 32
Toronto, 50

Chemicals *(otherwise undescribed)*
New York, 17 t 6 c. £543
Bombay, 25 brls. 118

Bourgas, 10 31
Genoa, 7 cks. 57
Boston, 10 70
Odessa, 5 t. 9 c. 1 q. 135
Calcutta, 1 10 54
Philadelphia, 13 9 356

China Clay—
Boston, 135 bgs. / 186 cks.
Calcutta, 140
Montreal, 400
Vera Cruz, 50 bgs.

Citric Acid—
Wellington, N.Z., 2 c. £12

Coal Products—
Aniline Oil
Barcelona, 20 cs.
Boston, 10 dms.
Madras, 11 pks.
Aniline Salts
New York, 7 cks.
Piræus, 15
Creosote Oil
Bordeaux, 160 cks.
San Francisco, 500
Naphthol
Valleyfield, 1 ck.
Pitch
Galatz, 20 brls.
Tar
Galatz, 30 brls.
Philadelphia, 150
Pt. Natal, 2
Hamburg, 97
Manaos, 6 cks.
Puerto Cabello, 20

Copperas —
B. Ayres, 5 t. 1 c. 3 q. £9
Samos, 2 5 5

Copper Sulphate—
Nantes, 5 t. 14 c. 1 q. £91
Ibrail, 5 4
Palermo, 8 4 133
Leghorn, 5 2 83
Genoa, 1 10 1 24
Lisbon, 1 2 2 17
Samarang, 5 17 3 95
Calcutta, 10 160
Brisbane, 1 16
Rouen, 22 5 2 368
Madras, 10 8
La Plata, 1 10 28
Antwerp, 7 2 110
Naples, 10 2 3 159
Alexandretta, 1 3 16
Melbourne, 10 162
Venice, 5 19 3 96
Copenhagen, 1 17
Catania, 7 4 119

Cream of Tartar—
Vera Cruz, 10 c. £43

Disinfectants—
Alexandria, 12 dms. £6

Dyestuffs —
Aniline Colours
Barcelona, 5 cks.
Boston, 1 kg. 3 cs.
Extracts
Barcelona, 96 pks.
Boston, 5 cks.
New York, 25 cs.
Logwood
Alexandria, 96 bgs.

Dyestuffs (*otherwise undescribed*)
Shanghai, 50 cs.

Glycerine—
Singapore, 10 c. £32
St. Petersburg, 2 2 q. 7
Vera Cruz, 7 t. 1 2 355
Sydney, 2 100
Shanghai, 5 15

Magnesia—
New York, 12 cs.
Paris, 103
Tampico, 3

Magnesite—
Halfax, 10 c. £4

Magnesium Chloride—
Nantes, 5 t. 6 c. £11
Akyab, 9 5

Magnesium Sulphate—
Alexandria, 100 kgs.
Pernambuco, 20 bgs.

Manure—
Honfleur, 61 t. 15 c. 3 q. £282
Gd. Canary, 10 64
Malaga, 10 76

Oxalic Acid—
Vera Cruz, 1 c. 2 q. £5

Paint—
Accra, 12 dms. 12 kgs.
Adelaide, 10 cks.
Alexandria, 400
Algoa Bay, 1
Antwerp, 45 dms. 10 / 7 cks.
Bahia, 67
Benin, 25
Bilbao, 26
Beyrout, 95
Bombay, 3 / 210 dms.
Brass, 2 31 / 2 cks.
Cadiz, 5 pks.
Calcutta, 15 cs.
Canea, 176
Constantinople, 162 dms.
E. London, 10 cks.
Iquique, 4
Jaffa, 8 pks.
Kingston, 2 cks.
Limon, 92
Manila, 204 dms. 2 cs.
Mollendo, 36 pks.
Nassau, 29
Panama, 4 cks.
Parnahyba, 6 brls.
Pernambuco, 3 pks.
St. Catharina, 6
St. John's, 238
St. Thome, 7 dms.
Sierra Leone, 96
Singapore, 1,001
Tampico, 2 cs.
Vera Cruz, 48 dms.

Painters' Colours—
Bombay, 106 cs. 215 kgs.
Hamburg, 33 pks.
Johannesburg, 10
M. Video, 60
Para, 2 cks. 93 brls 65
Philadelphia, 4 pks.
Prevesa, 4
Rotterdam, 1 ck. 5 cs.
Santander, 10 brls.
Salora, 13 1
Stettin, 8 cks.

Paraffin Wax—
Genoa, 152 bxs.
Leghorn, 50 kgs.
Vera Cruz, 20 bgs.

Picric Acid—
New York, 1 t. 19 c. 2 q. £200

Phosphates—
Hamburg, 22 t. 7 c. 1 q. £78

Phosphorus—
Hiogo, 5 t. 15 c. £1,107
Shanghai, 18 146
Vera Cruz, 2 19

Potashes—
Alexandria, 11 c. £10

Potash Salts—
N. Orleans, 24 t. 9 c. 3 q. £2150

Potassium Bicarbonate—
New York, 2 t. 4 c. 3 q. £58

Potassium Bichromate—
Rotterdam, 1 t. 1 c. 2 q. £35

Potassium Carbonate—
Boston, 18 t. 6 c. £322
Para, 8 10

Potassium Chlorate—
Alexandria, 5 cks. £32
Ancona, 1 t. 10 c. 45
Bari, 9 14
Bourgas, 4 6
Christiania, 4 120
Gutujewski, 51 1,530
Hamburg, 6 5 165
Hiogo, 17 10 523
Lisbon, 7 10 210
Naples, 1 30
New York, 7 10 216
Shanghai, 7 210
St. Petersburg, 7 10 225
Vera Cruz, 5 8

Potassium Prussiate—
Santos, 7 c. 1 q. £31
Vera Cruz, 1 t. 63

Salt—
Akassa, 180 t. 16 c.
Algoa Bay, 22 17
Antwerp, 95
Bahia, 20
Bakana, 50
Baltimore, 325
Banana, 50
Boston, 200
Brass, 10
B. Ayres, 150 cs.
Calcutta, 1 18
Cameroons, 119
Cape Palmas, 10
Faroe Islands, 60
Ghent, 100
Loango, 10
Montreal, 755
N. Orleans, 215
Pt. Antonio, 10
Pt. Natal, 100 1,120 sks.
Quebec, 12,000 bgs.
Rosario, 25 cs.
St. John's, N'fd., 600 t.
Salt Pond, 12 10 / 500 bgs.
Shanghai, 25
Sierra Leone, 2,000
Sydney, 500 t.
Valparaiso, 16
Yokohama, 25

Salt Cake—
Antwerp, 100 t. £130

Saltpetre—
Cabedello, 1 t. 12 c. 1 q. £34
Malta, 5 5
Maranham, 11 2 13
Santos, 8 6 168
Syra, 4 19 3 104

Sheep Dip—
B. Ayres, 37 t. 3 c. £1,460
Montreal, 10 3 q. 23
Punta Arenas, 50 cks. 100 dms. 312
Sydney, 5 t. 200

Soap—
Akassa, 72 tins
Alexandria, 10 kgs. / 82 bxs. 6 dms.
Algoa Bay, 50 cs.
Antwerp, 545
Arrecife de Lanzarote, 140
Barbadoes, 17
Beira, 100
Bombay, 1,220
Brussels, 160
Buguma, 50
Calcutta, 511
Cameroons, 50
Cape Town, 215
Chama, 80
Chefoo, 47
Colmar, 230
Conakry, 580
Dunedin, 1
Durban, 700
E. London, 75
Elmina, 100
Gibraltar, 200 260
Gd. Bassa, 80
Gd. Popo, 20
Grenada 50
Hong Kong, 1,867
Iquique, 4 cks.
Kingston, 1,527
Lagos, 100
Las Palmas, 100
Lausanne, 250
Limassol, 22
Loanda, 1
Lome, 50
Malta, 25
Manaos, 420
Melilla, 70
Montreal, 100
Mossel Bay, 500
Pelotas, 1
Penang, 700
Piræus, 11
Pt. Natal, 1,995
Puerto Cortez, 50
Rangoon, 743
Rotterdam, 270 16 crts.
St. John's, N'fld., 70
St. John's, 40 7
St. Kitts, 150
St Lucia 97
San Fernando, 506
Shanghai, 5,281
Sierra Leone, 90
Singapore, 570
Teneriffe, 475
Tangiers, 41
Toronto, 1,130
Trinidad, 152 1
Valparaiso, 2 brls.
Venice, 5 cs.
Victoria, B. C., 3

Soap Lye—
Rotterdam, 79 dms.

Soda Ash—
Aalborg, 50 brls.
Abo, 41 cs.
Bombay, 7 cks.
Boston, 102
Copenhagen, 100 bgs.
Hamburg, 1,000
Kingston, 8
London, 80
Magog, 49 tcs.
M. Video, 5 brls.
Montreal, 19 tcs.
New York, 65
Pt. Natal, 41 kgs.
Preston, 86 bgs.
Rio de Janeiro, 400
Rotterdam. 10 8
Santa Catharina, 30 brls.
Smyrna, 6
Syra, 100
Varna, 75
Venice, 200

Soda Crystals—
Malta, 125 brls.
Singapore, 25 kgs.
Stamboul, 34
Zanzibar, 25

Sodium Bicarbonate—
Alexandria, 40 kgs.
Antwerp, 40 8 cks.
Barcelona, 110
Bilbao, 70 brls.
Bombay, 285 20
Bordeaux, 55
Boston, 255
E. London, 30 bgs.
Galatz, 20 kgs.
Genoa, 50
Ghent, 4
Gutujewski, 500
Hamburg, 26
Hong Kong, 25
Johannesburg, 20
Karachi, 32 pks.
Malaga, 30 75
Malta, 10 15
Montreal, 200 1 cs.
Odessa, 350
Pt. Natal, 20
Riga, 300
Rotterdam, 40
Rouen, 205
St. John's, 30
San Jose de Guatemala, 40
Smyrna, 15
Sydney, 100 4 cks.
Valencia, 30
Varna, 20
Vera Cruz, 10
Yokohama, 500

Sodium Carbonate—
Boston, 56 brls.

Sodium Chlorate—
Antwerp, 20 kgs.
Gutujewski, 200
Rouen, 4 cks.
St. Petersburg, 250

Sodium Silicate—
Bilbao, 55 brls.

Strontia—
New York, 1 t. £20

Sulphur—
Cartagena, N.G., 1 c. £11
Para, 2 t. 10 21

Sulphuric Acid—
Beira, 1 t. 17 c. £20
Manaos, 7 5
Sydney, 6 68

Superphosphates—
Gd. Canary, 1 t. £4
Honfleur, 609 11 c. 3 q. 968
Stettin, 300 600
Valencia, 250 1 3 601
Venice, 98 10 2 186

Varnish—
M. Video, 5 cs.
Paranagua, 1
Puerto Cabello, 2 dms.
Rio de Janeiro, 20
Wellington, 5

White Lead—
Alexandria, 15 brls.
Bahia, 2 kgs.
Valparaiso, 30

Zinc Chloride—
Bombay, 7 t. 10 c. £135
Piræus, 4 3 90

MANCHESTER.

Week ending August 17th.

Alum—
Bombay, 70 brls.

Anido Salts—
Switzerland, 12 cks.

Aniline Colours—
Belgium, 1 cs.
Germany, 1

Bones—
Beauvais, 273 bgs.

Caustic Soda—
Sfax, 5 dms.

Chemicals (*otherwise undescribed*)
Tripoli, 50 brls.

Products—
niline Oil
ium, 3 dms.
niline Salts
ium, 1 ck.
nany, 10
ia, 14 pns.
nthracene
nany, 82 cks.
nzol
stiania, 8 cks.
ta Naphthol
nany, 3 kgs.
tch
eilles, 1,039 t. 14 c.
ar
s, 31 brls.
acts—
stiania, 5 cks.
ia—
bay, 10 bgs.
ma Acid—
zerland, 10 cks.
ber Salts—
bay, 30 bgs.
—
nany, 10 cks.
Oxide—
s, 14 cks.
rood—
stiania, 50 bgs.
—
ium, 12 cks.
—
andria, 1 cs.
bay, 16 cks. 3 4 bxs
Crystals—
13 brls.
m Hyposulphite—
rout, 3 brls.
m Naphthionate—
dia, 34 bgs.
zerland, 22 cks.

HULL.

Week ending August 13th.

l—
en, 2 cks.
al, 54 pks.
—
stiania, 6 cks.
onium Sulphate—
kirk, 500 bgs.
rmo, 244
ce, 290
Slag—
ewalls, 766 t.
um Carbonate—
stiania, 22 cks.
erdam, 6
icals *(otherwise undescribed)*
terdam, 247 cks.
4 59 cs.
verp, 1 11
stiania, 1,318 slbs.
enburg, 12 55 pks.
burg, 5 130
go, 2
a, 1 50
, 53 306
erdam, 150
Petersburg, 28
in, 12
ste, 31
ce, 2
nseed Oil—
terdam, 537 c.
verp, 459
en, 100
stiania, 71
nhagen, 35
cirk, 100
st, 101
enburg, 200
burg, 334
ingen, 68
erdam, 1,062
cholm, 345
in, 19
—
verp, 1 cs.
ed Oil—
terdam, 61 c.
stiania, 356
nhagen, 17
stheim, 230
burg, 68
erdam, 45
incent, 4

Manure—
Dunkirk, 100 t.
Venice, 1,562 bgs.
Painters' Colours—
Abo, 2 cks.
Amsterdam, 15
Antwerp, 52 3 cs.
Bari, 6
Boston, 20
Bremen, 40
Christiania, 60 16 dms.
Copenhagen, 1 16
Drontheim, 10
Gothenburg, 12 2 224
Ghent, 32 129
Hamburg, 13 2 10 pks.
Helsingfors, 150 12
New York 59 100
Norrkoping, 40
Rotterdam, 23
St. Petersburg, 3
St. Vincent, 2
Stettin, 14 2
Stockholm, 6
Uleaborg, 2
Venice, 24
Phosphorus—
Wasa, 2 cs.
Pitch—
Antwerp, 145 t.
Slag Meal—
Riga, 301 t.
Soap—
Amsterdam, 97 cs.
Christiania, 2
Hamburg, 1
Stettin, 1
Starch—
Copenhagen, 130 cs.
Tallow—
Gothenburg, 14 cks.
Hamburg, 1
Helsingfors, 25
Konigsberg, 22
Riga, 55
Stockholm, 7
Wasa, 124
Tar—
Amsterdam, 5 cks.
Christiania, 5
Copenhagen, 20 cs.
Hamburg, 8
Rotterdam, 10
Varnish—
Copenhagen, 3 cks.
Hamburg, 5
Harlingen, 1
Reval, 1 cs.
Rotterdam, 1
St. Petersburg, 1 4
Stettin, 1

GLASGOW.

Week ending August 18th.

Ammonium Sulphate—
France, 5 t. 1¼ c.
Hamburg, 50 12
Italy, 279 14
Nantes, 55 17¼
Bone Dust—
Hamburg, 1,300 lbs.
Boracic Acid—
Melbourne, £22
Calcium Carbonate—
Lisbon, £20 10s.
Carbolic Acid—
Rotterdam, £50
Coal Products—
Alizarine Oil
Lisbon, £76
Creosote Oil
Danzig, 10 t. 10 c.
Russia, £300
Naphtha
France, £100
Pitch
Antwerp, £81
Danzig, 53 t. 2 c.
Gothenburg, 350
Hamburg, 100 10
Russia, 450
Tar
Bombay, £43 10s.
Canada, £367
Danzig, 240 t. 4 c.
Russia, 495
St. Petersburg, 236 5
Copperas—
Bombay, £98
Dextrine—
New York, £220

Dyestuffs—
Alizarine Colours
Lisbon, £25
Extracts
Boston, £207
Lisbon, £47 14s.
Logwood
Lisbon, £48 11s.
Dyestuffs *(otherwise undescribed)*
Lisbon, £80
Farina—
Philadelphia, £75
Rio de Janeiro, 67
Linseed Oil—
B. Ayres, 1 t. 2 c.
Canada, 5 ¾
Litharge—
Philadelphia, £27
Manganese (Recovered)—
Rotterdam, 10 t.
Paint—
B. Ayres, £138
Pt. Elizabeth, 23
Painters' Colours—
Canada, £98
Huelva, 72
Italy, 24
Valparaiso 40
Paraffin Wax—
Danzig, 10 t. 2 c.
Drontheim, 194
France, £30
Italy, 36
Odessa, 39
Rotterdam, 10
Russia, 750
Stavanger, 1
Potassium Bichromate—
Canada, £244
Lisbon, 23
Sheep Dip—
B. Ayres, £240
Soap—
Bombay, 3 t. 7¼ c.
E. London, 11,200 lbs.
Kingston, 2 t. 10 c.
Sodium Arseniate—
Lisbon, 2 t. 14 c.
Sodium Bichromate—
Canada, 2 t. 4¾ c.
Starch—
Lisbon, £30
Rio de Janeiro, 45
Rotterdam, £13 7s.
Tallow—
Amsterdam, 9 c.
Rotterdam, 9 t. 16
Tannic Acid—
Lisbon, £25
Ultramarine—
Boston, £39
White Lead—
Jagersfontein, 5½ c.
La Plata. £103
Montreal, 146
Zinc Ashes—
Rotterdam, £180

TYNE.

Week ending August 13th.

Alkali—
Amsterdam, 15 t. 5 c.
Hamburg, 5 13
Ammonium Sulphate—
Dunkirk, 20 t. 4 c.
Antimony—
Montreal, 2 t.
Rotterdam, 3
Asbestos—
Bergen, 1 t. 6 c.
Barium Binoxide—
Rouen, 24 t. 17 c.
Barium Carbonate—
Rotterdam, 103 t.
Bleaching Powder—
Aalborg, 21 t. 19 c.
Abo, 3 5
Amsterdam, 8 15
Antwerp, 71 15
Bergen, 10 2
Christiania, 6 14
Copenhagen, 15 18
Hamburg, 7 17
Helsingfors, 10 2
Rotterdam, 7 15
Bone Grease—
Genoa, 7 t. 1 c.

Caustic Soda—
Abo, 39 t. 1 c.
Antwerp, 9 17
Copenhagen. 4 1
Hamburg, 1 16
Helsingfors, 25 14
Rotterdam, 1 13
Venice, 29
Copperas—
Helsingfors, 1 t. 1 c.
Creosote Oil—
Rouen, 1 t. 8 c.
Fluor Spar—
Copenhagen, 10 c.
Iron Oxide—
Sebastopol, 4 t. 12 c.
Paint—
Antwerp, 2 t. 3 c.
Hamburg, 1 10
Sebastopol, 12
Painters' Colours—
Antwerp, 1 t. 13 c.
Hamburg, 2
Pitch—
Rouen, 20 t.
Rosin—
Sebastopol, 9 t.
Soda—
Christiania, 7 t. 7 c.
Genoa, 5
Helsingfors, 1 6
Rotterdam, 20
Soda Ash—
Lisbon, 15 t. 1 c.
Sulphur—
Christiania, 350 t.
Helsingborg, 9 c.
Tallow—
Abo, 9 t. 5 c.
Hamburg, 3 18
Tar—
St. Vincent, 1 t. 8 c.
White Lead—
Christiania, 2 c.
Copenhagen, 15
Helsingfors, 5
Montreal, 24 t. 14
Zinc Oxide—
Christiania, 1 c.

GOOLE.

Week ending August 10th.

Alkali—
Amsterdam, 2 cks.
Aniline—
Rotterdam, 5 cks. 1 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 31 cks.
Coal Products *(otherwise undes.)—*
Amsterdam, 84 cks.
Antwerp, 1 cs.
Boulogne, 26
Rotterdam, 505
Dyestuffs *(otherwise undescribed)*
Ghent, 1 ck.
Hamburg, 4
Logwood—
Hamburg, 20 t.
Manure—
Ghent, 254 bgs.
Hamburg, 300
Painters' Colours—
Amsterdam, 2 cs.

GRIMSBY.

Week ending August 13th.

Alkali—
Hamburg, 5 cs.
Caoutchouc—
Malmo, 1 cs.
Chemicals *(otherwise undescribed)*
Dieppe, 4 cs. 1 pk.
Gothenburg, 1 ck. 1
Malmo, 1
Coal Products *(otherwise undes.)—*
Dieppe, { 58 cks. 1 cs. 3 pks. / 3 kgs.
Manure—
Esbjerg, 1,016 bgs.
Painters' Colours—
Antwerp, 1 ck. 1 pk.
Hamburg, 3 10 dms.
Rotterdam, 2 cs. 11 pks.

PRICES CURRENT. WEDNESDAY, August 24th, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may va

	£	s.	d.
Acids :—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	6/-	&	8/6
„ Glacial .. .. „		37/6	
Arsenic S.G., 2000° .. .. „	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
„ (Cylinder), 30° Tw. .. .. „	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. „	0	0	1½
Oxalic .. .. nett „	0	0	3
Phosphoric, 1750° .. .. „	0	0	11¾
Picric .. .. „	0	1	0
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
„ (monohydrate) .. .. „	5	10	0
„ (Pyrites, 168°) .. .. „	3	0	0
„ „ 150° .. .. „	1	5	0
„ (free from arsenic, 145°) .. .. .. „	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. „	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. „	0	1	1
Arsenic, white powdered .. .. nett per ton	14	5	0
Alum (loose lump) .. .. „	4	7	6
Alumina Sulphate (pure) .. .. „	3	17	6
Aluminoferric .. .. „	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne „	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
„ ·880=28° B .. .. „	0	0	2½
„ =24° B .. .. „	0	0	1¾
„ Carbonate .. .. nett „	0	0	3
„ Muriate .. .. per ton	17	5	0
„ „ (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
„ Nitrate .. .. per ton	31	0	0
„ Phosphate .. .. per lb.	0	0	3
„ Sulphate (grey) London .. .. .. per ton	10	5	0
„ „ (grey) Hull .. .. „	10	1	3
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt „ .. .. „	0	0	5
Antimony .. .. per ton	37	0	0
„ (tartar emetic) .. .. per lb.	0	0	6¾
„ (golden sulphide) .. .. „	0	0	9
Barium Chloride .. .. per ton	6	17	6
„ Carbonate (native) .. .. „	3	15	0
„ Sulphate (native levigated) .. .. .. „	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett „	5	2	6
„ Liquor, 7 % .. .. „	3	10	0
Bisulphide of Carbon .. .. „	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. „	15/-	to	25/-
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. „	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9½
„ 50/90 „ .. .. „	0	0	9½
Carbolic Acid (crude 60°) .. .. per gallon	0	1	11
„ (crystallised 40°) .. .. .. per lb.	0	0	7
„ (liquid 95/97% .. .. per gallon	0	0	11
Creosote (ordinary) .. .. „	0	0	2¾
„ (filtered for Lucigen light) .. .. „	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. „	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. „	1	0	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	52	1	3
„ Sulphate .. .. „	16	10	0
„ Oxide (copper scales) .. .. „	46	0	0
Glycerine (crude) 80 % .. .. „	29	0	0
„ (distilled S.G. 1250°) .. .. „	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
„ Sulphide (antimony slag) .. .. „	2	0	0
Lead (sheet) .. .. „	14	5	0
„ Litharge Flake (ex ship) .. .. „	17	10	0
„ Acetate (white „) .. .. „	26	0	0
„ „ brown „) .. .. „	17	10	0
„ Carbonate (white lead) pure .. .. .. „	17	0	0
„ Nitrate	20	0	0

	£	s.	
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	
„ „ (grey) (ex ship .. .. „	7	2	
Magnesium (ribbon and wire) .. .. per oz.	0	2	
„ Chloride (ex ship) .. .. per ton	2	10	
„ Carbonate .. .. per cwt.	1	17	6
„ Calcined Magnesia .. .. per ton.	9	10	0
„ Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. „	17	5	0
„ Borate .. .. per cwt.	2	5	0
„ Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. „	0	2	9
„ „ Miscible, 60° O.P .. .. .. „	0	3	11
Oils :—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. „	18	5	0
Stearine .. .. per ton	25	0	0
Phosphorus (yellow) .. .. per lb.	0	1	11
„ (red .. .. „	0	2	8
Potassium Bichromate .. .. nett per lb.	0	0	3½
„ Carbonate, 90% (ex ship) .. .. .. per ton	15	5	0
„ Chlorate .. .. per lb.	0	0	3½
„ Cyanide, 98% .. .. „	0	1	1
„ Hydrate (Caustic Potash) .. 90 % .. per ton	23	0	0
„ „ (Caustic Potash) 75/80 % .. „	18	15	0
„ Potash Hydrate Liquid 50 % .. .. „	11	0	0
„ Nitrate (refined) .. .. „	19	15	0
„ Permanganate .. .. per cwt.	3	2	6
„ Prussiate Yellow .. .. per lb.	0	0	6½
„ Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
„ Muriate, 80 % do.) .. .. .. „	8	15	0
Silver (metal) .. .. per oz.	0	2	3 11/16
Sodium (metal) .. .. per lb.	0	2	9
„ Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
„ „ (Caustic Soda-ash) 48 % .. .. „ „	4	5	0
„ „ (Carb. Soda-ash) 48% .. .. „ „	4	0	0
„ „ (Alkali) 58 % (Bags) .. .. „ „	4	2	6
„ „ (Soda Crystals) .. .. .. „ „	2	5	0
„ Acetate (ex-ship) .. .. „	11	15	0
„ Arseniate, 45 % .. .. „	11	10	0
„ Chlorate .. .. per lb.	0	0	3½
„ Borate (Borax) .. .. net, per ton.	12	10	0
„ Bichromate .. .. „ per lb.	0	0	2¾
„ Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	8	0	0
„ „ (74 % Caustic Soda) „ „ „	7	15	0
„ „ (70 % Caustic Soda) „ „ „	7	2	6
„ „ (60 % Caustic Soda) .. „ „	6	2	6
„ „ (pure liquor 90° Tw.) .. „ „	3	15	0
„ „ 77/78 % powdered (99 % hydrate) „	11	10	0
„ Bicarbonate .. .. „	6	10	0
„ Hyposulphite .. .. „	5	5	0
„ Manganate, 25% .. .. „	15	0	0
„ Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
„ Nitrite, 98 % .. .. per ton	25	0	0
„ Phosphate .. .. „	9	5	0
„ Prussiate .. .. per lb.	0	0	5
„ Silicate (glass) .. .. per ton	4	10	0
„ „ (liquid, 100° Tw.) .. .. .. „	3	7	6
„ Stannate, 40 % .. .. per cwt.	2	15	0
„ Sulphate (Salt-cake) .. .. per ton.	1	5	0
„ „ (Glauber's Salts) .. .. „	1	7	6
„ Sulphide .. .. „	7	5	0
„ Sulphite .. .. „	4	17	6
Strontium Hydrate, 100% .. .. „	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅜
„ Barium, 95 % .. .. „	0	0	4
„ Potassium .. .. „	0	0	6⅜
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. „	6	3	9
„ Brimstone : Best Quality .. .. .. „	4	12	6
Superphosphate of Lime (26%) .. .. „	2	10	0
Tallow .. .. „	22	0	0
Tin Crystals .. .. per lb.	0	0	5½
„ English Ingots .. .. per ton	77	10	0
Zinc (Spelter) .. .. „	20	15	0
„ Chloride (solution, 100° Tw.) .. .. .. „	6	0	0
„ Sulphate, Crystal .. .. „	6	7	6

f.o.r. w'ks. | 10 ton lots

THE

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ION begins September 19th, 1898. Chemical artment under the Principal and Mr. H C. L. BLOXAM. Courses of in Inorganic (1st year, Elements; 2nd year, Advanced Non-metals; 3rd nced Metals) and Organic Chemistry. Accompanying Laboratory cluding general manipulation, preparation of pure substances, and ana- s.
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E. GRIFFITHS, Secretary

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CURRENT TOPICS.

THE ADMINISTRATION OF CHLOROFORM.

ON various occasions we have referred in these columns to the lamentable laxity which seems to be associated with the use and administration of anæsthetics.

Our complaint has often been answered by the contention that the matter was in capable hands, and the supposed laxity was wholly imaginary, as witness the evidence given by medical gentlemen in those cases which come before the public notice.

Without reflecting in any way upon the reliability of the medical profession as a whole, we venture to aver that familiarity breeds a form of contempt for the dangers of anæsthetics, which leads to a number of fatalities—fatalities which by the more persistent presence of a wholesome respect of the responsibilities, might have been obviated. This opinion is confirmed both by the general experience of the last ten years and an intimate acquaintance with the details of several recent fatalities.

Moreover, it is evident that we are not alone in our opinion that there is room for improvement in the present system of administering anæsthetics, for it appears that an Association is in course of formation, which has for its object the reformation of the methods now employed in the administration of chloroform, in accordance with the principles enunciated by Dr. Snow.

No doubt there is a vast number of practitioners who stand in no need of such an Association, but it is to be hoped that no false feeling of resentment will stand in the way of their lending their heart-whole support to the movement.

As far as they, individually, are concerned, there may be no necessity to countenance such an Association, but on the other hand by falling in line they will strengthen the position of the medical and dental professions, as a whole, by showing how few there are who are not willing to encourage and utilise to the utmost every available means of minimising mishaps.

In the near future we hope to give further particulars of the aims and objects of the Association to which we have referred.

A BLACK LETTER WEEK.

The holiday season always brings with it a more or less distressing record of accidents, resulting from people temporarily forsaking their business or profession in order to recuperate their health.

In seeking this end many indulge in recreations, into which the element of danger enters in varying degree, with the result that each holiday season has a history.

The percentage of fatalities is comparatively insignificant, but the reality of its existence is brought home with additional force when the ranks of science suffer as they have just done by the loss of Dr. John Hopkinson. The accident which proved so fatal is rendered all the more pitiful by the

fact that Dr. Hopkinson was a careful and experienced Alpine climber, and could therefore presumably indulge in this form of recreation with impunity.

His loss will be deeply felt and regretted in many spheres. In the electrical world he held a position of high repute, and was also closely associated with the development of electro-chemistry as an industry. Apart from his professional career he was a familiar figure at the meetings of our leading scientific societies, and an enthusiastic supporter of Arctic and Antarctic exploration.

In addition to this heavy loss in the scientific world, two well known captains of industry have passed beyond our ken, in the personalities of Mr. Chambers and Mr. Pease, whose careers are referred to elsewhere in this issue. The news of this week has therefore been black indeed for the chemical and allied industries, and we trust it may be a long while ere such a sad record recurs again.

REPORT ON THE MAIDSTONE EPIDEMIC.

THE report of Mr. J. S. Davy, Dr. Thomson, and Mr. G. W. Willcocks, Local Government Board inspectors, with reference to the Maidstone typhoid epidemic of 1897 was received at Maidstone last week. The inquiry conducted by the three inspectors was opened at the Sessions-house, Maidstone on January 31st, and lasted eight days. The epidemic began in September of last year and extended over three or four months Up to January 20th, 1898, there had been a total of 1,681 cases in the borough, excluding 107 notifications by the Kent County Lunatic Asylum at Barming. There were also 20 cases in the Maidstone Union Workhouse, which is situated outside the borough, and, in addition, a number of persons were attacked in rural parishes which adjoin Maidstone, and which are supplied with water by the Maidstone Water Company.

After sketching in great detail the history of the epidemic, the Commissioners state in their concluding comments :—

"On a review of the whole of the epidemic we have no hesitation in coming to the conclusion that the epidemic was caused by the pollution of the water supplied by the Maidstone Company from their Farleigh sources. It is true that there is abundant testimony to show that grave sanitary defects exist in the construction of some of the sewers and of many house drains and water-closets within the borough; while one of the expert witnesses, Dr. Corfield, said that, in his opinion, these defects were sufficient to account for the epidemic. But the sudden and simultaneous outbreak of fever over a wide area, and the rapidity with which the epidemic grew, cannot be accounted for by the existence of defective conditions of sewerage and drainage. Further, the facts as to the local incidence of the disease are not consistent with the theory that these conditions had anything to do with its origin. The old brick barrel sewers are almost all in the lower part of the town, which was comparatively free from attack, and the hand-flushed and defective house drains are distributed pretty equally over the whole town, whereas the cases of typhoid fever were confined to the Farleigh area of water supply to an extent which quite precludes the possibility of mere chance."

Dealing with the contention of the water company that many of the typhoid cases were wrongly attributed to the Farleigh water supply the Commissioners say :—

"We are of opinion that many of the typhoid cases in the borough were due to defects of drainage and sewerage, with consequent pollution of the soil underlying the town. The responsibility for the existence of these insanitary conditions lies with the town council, whose duty it was to take steps that would lead to effective remedy of these defects. This duty they have in large measure neglected, notwithstanding that for many years the medical officer of health has repeatedly warned them of the risk to which the inhabitants of the town were exposed by the continuance of these insanitary conditions."

Concluding their report the Commissioners state :—

"The history of the epidemic appears to us to raise the question as to how far the regulations of the board relating to the duties of medical officers of health and the statutes which regulate the powers and obligations of private water companies are sufficient to ensure a reasonable amount of protection to the public heajth. The general order of the board of 1891 prescribes that the medical officer of health 'shall inform himself as far as may be practicable respecting all influences affecting or threatening to affect injuriously the public health within the district.' This regulation might be held to make it the duty of the medical officer to visit and inspect the works of a private water company supplying water to his district, even though the works were situate outside it, as is the case at Maidstone. This, however, was not the construction put upon the regulation by Mr. M. A. Adams, the medical officer for Maidstone, and as a matter of fact he had never seen the sources of the water supply furnished to the Furleigh area. He pointed out with considerable force that he had no legal right of access to the works, and as to taking samples of the water. Yet section 7 of the Public Health (Water) Act, 1878, imposes upon rural sanitary authorities the duty of taking such steps as may be necessary to ascertain the condition of the water supply within their district. It must be stated, however, that it did not appear that any application to inspect the works or to take samples of the springs separately was ever made to the directors of the water company by either of the sanitaay authorities concerned."

REPORT ON THE EARL'S COURT EXPLOSION.

THE report of Capt. Thomson, R.A., Her Majesty's Inspector of Explosives on the explosion at Earl's Court last July has just been issued. It appears that Captain Thomson holds different views on the danger of low flash petroleum to the late Col. Majendi. The following is the digest of the report which has found place in nearly all the leading dailies :—"The explosion took place in the magazine attached to the Empress Theatre. One man was killed and two were injured. Inside the magazine was half a hundredweight of metallic sodium, a quantity of gunpowder and cartridges, and a zinc bath containing 'tea rose' petroleum. The temperature of the atmosphere in the shade on the day in question was 75 degrees Fahr., and as the door of the building was also closed all day the temperature of the magazine was probably higher. The so-called 'tea rose oil' [alias "Royal Daylight"—ED. *C.T.J.*] as Capt. Thomson described the petroleum, has a flash point of from 74 to 78 Fahr. Into this bath the sodium was placed, and the probable explanation of the explosion is thought to be that a fragment of sodium having fallen on the floor ignited itself by its hygroscopic nature, the flame immediately firing the petroleum vapour. Captain Thomson concurs in the decision that sodium is not an explosive within the meaning of the Act, but says it is a very dangerous substance from the point of view of fire risk. The accident, he thinks, may be said to have arisen from a most unfortunate misunderstanding, for which, however, he does not consider anyone is seriously to blame."

AN AMUSING COMPARISON

is afforded by the following digest, which seems to have been peculiar to the *Times*. All reference to the petroleum vapour is carefully expunged :—"The explosion took place in a small magazine erected beyond the end of the Empress Theatre buildings, in which the explosives used in the naval display in the theatre were stored, and one man was killed and two injured. After giving particulars of the explosion and describing its effects and the contents of the magazine, which, he points out, was specially constructed under the supervision of the architects' and chemists' department of the London County Council, the inspector proceeds to discuss the cause of the explosion. Although he considers that the suggestion that a lighted match was thrown down near the door of the magazine is a possible explanation, he does not think it presents any high degree of probability. In his opinion, it is far more probable that the ignition occurred spontaneously inside the magazine, and that the cause must be sought in some conditions which would have given rise to an ignition by metallic sodium, a quantity of which was stored in the building. He does not consider that anyone is seriously to blame for the accident, but that it arose from an unfortunate misunderstanding between the officer of the County Council and the keeper of the magazine as to what was to be stored in the building. He adds that, though not an offence under the Act, it was, in his opinion, a grave error of judgment to keep metallic sodium and petroleum oil in the same building as gunpowder."

It is evident that since the *Times* has taken to championing the cause of the American low-flash gold bugs, it has lost its power for comprehending facts that are in any way awkward. The statement that "the cause must be sought in some conditions which would have given rise to an ignition by metallic sodium," shows they have caught the convenient vagueness of expression which characterises all low-flash testimony.

THE CHLORIDE ELECTRICAL STORAGE SYNDICATE, LTD.—The ordinary annual general meeting of the above company was held at Clifton Junction, near Manchester, on Tuesday the 19th ult., F. H. Bowman, Esq., D.Sc., F.R.S.E., in the chair. The notice convening the meeting having been read by the secretary, the directors' report and statements of accounts for the year ending June 30th, 1898, were received and adopted. A dividend at the rate of 7 per cent. per annum was declared on the "A" shares for the year ended June, 1898. The retiring director and auditors were re-elected, and a vote of thanks passed to the chairman and directors.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Explosives. J. Ross, J. C. Cook, and W. A. Mason. 17,577. August 15.
Treating Lead Fume. F. Ellershausen. 17,579. August 15.
Treating Fecula with Alkaline Chlorites to obtain Gummy Substances. Chas. Brueder. 17,650. August 16.
Crushing Apparatus. B. L. E. Moustier. 17,759. August 17.
Caustic Soda and Sulphuric Acid by Electrolysis from Alkaline Sulphates. J. G. A. Rhodin. 17,794. August 18.
Electrolytic Cell. S. O. Cowper-Coles. 17,828. August 18.
Manufacture of Soap. J. McNeill. 17,842. August 19.
Apparatus for Decomposing Chlorides. P. Naef. 17,852. August 19.
Extracting Potash and Soda Salts, Bromides, Iodides, etc., from the Waste Liquors obtained in Extracting Ammonia from Blast Furnace Gases. W. Galbraith. 17,937. August 20.
Improved Match Making Composition. P. Ward. 17,957. August 20.
Improved Match Making Composition. P. Ward. 17,965. August 20.
Manufacture of Resinous Soap. F. Arledter. 17,977. August 20.
Improved Match Making Composition. P. Ward. 17,978. August 20.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Chambers for the Manufacture of White Lead. Saxby's White Lead Syndicate, Limited, Hythe Wharf, Cumberland Park, Willesden, and H. G. Percival, Hythe House, Willesden. Eng. Pat. 12,348. June 1, 1898.

The chambers are constructed so as to be regulated from without. The floor is hollow, and contains steam pipes for heating, and air and carbon dioxide ducts. The inside of the chamber is fitted with shelving, which carries the lead to be eroded. Acetic acid is placed in trays on the floor and vaporised by the heat from the steam pipes. Air and carbon dioxide are admitted and warmed as desired, the ducts being opened or plugged from the outside. There are five figures illustrating the system, which must be consulted for the details of construction.

Improvements in Apparatus for the Treatment of Sewage or other Liquids. D. Cameron, 1, Sylvan-road, Exeter, F. J. Commin, 7, Bedford-circus, Exeter, and A. J. Martin, Bradninch House, Exeter. Eng. Pat. 22,965. October 6, 1897.

This patent refers solely to mechanical apparatus for regulating the supply and discharge of the filters employed in the "septic" process. By an ingenious arrangement of buckets, actuated by the overflow from the filters, the filling and discharging valves are operated in rotation. There are two figures.

Alkali Phenate Compound for Bleaching, Scouring, and Stripping. E. M. Taylor, Cuckoo Nest, Polefield, Prestwich. Eng. Pat. 25,042. October 29, 1897.

Liquid carbolic acid and soda ash are mixed together and the alkaline phenate crystallised out. Directions are given for preparing potassium or sodium phenate, either neutral or caustic. Resin is also added in some cases. It is claimed that for bleaching and scouring 4lbs. of the phenate do the work of 10lbs. of soda ash or caustic, while souring is unnecessary after the lime boil, a little phenate being added to the lime kier instead.

Improvements in Obtaining Gutta Percha and in the Utilisation of the Bye-products arising therefrom. R. J. Frieswell and Messrs. Brooke, Simpson, and Spiller, Ltd., Atlas Works, Hackney Wick, London. Eng. Pat. 19,729. August 26, 1897.

The crude rubber is macerated with caustic soda in esparto boilers and washed by means of jiggers, as in the manufacture of "half-stuff." It is then run on to a paper or board machine to produce a dry porous mass of cellulose mixed with gutta-percha. The latter may be abstracted by carbon bisulphide, etc., and precipitated in accordance with patents 19,727 and 19,728, 1897, and the cellulose utilised in the ordinary way. If it is desired to retain the gutta-percha the paper is treated with enough solvent to ensure even distribution without extracting the gutta-percha.

Improvement in the Treatment of the Oxide of Iron used for the Absorption of Sulphuretted Hydrogen in the Purification of Illuminating or other Gases, or otherwise. F. M. Mooney, 74, Rogerson's Quay, Dublin. Eng. Pat. 19,590. August 25, 1897.

The residue left after burning off the sulphur from the "spent oxide" is drawn while hot from the furnace and immersed in water. The latter is run off after settling. The partially dried oxide is then mixed in a disintegrator with peat mould or other form of fibrous organic matter. The desired porosity is thus ensured, while plunging into water causes absolute saturation, which is essential to successful absorption. Any free acid is neutralised, when it is claimed the product absorbs sulphuretted hydrogen as well as fresh bog ore.

A Liquid Composition for the Removal and Prevention of Scale, and Protection from Corrosion on Inside of Boilers. T. and G. H. Swift, respectively of 84 and 88, Ellison-street, Hebburn-on-Tyne. Eng. Pat. 19,344. August 21, 1897.

One pound of Irish moss is boiled for three hours with ten gallons of fresh water. To this the following ingredients are added:—1lb. each of carbonate of potash, soft soap, and tallow; 2lbs. Stockholm tar; 13lbs. of soda crystals; and two pints of cotton-seed oil. The whole is boiled down to eight gallons, strained and packed in tins. About half-a-pint to every one h.p. is used twice a week.

THE MANUFACTURE OF PEAT BRIQUETTES.

THIS industry is in a fair way to become an important and flourishing one in the neighbourhood of Stettin. So far, the factory at Langenberg is somewhat of a new venture, as it has only been in existence for two years, but up to now it has proved a complete success. It appears that proprietors of turf moors in Scotland and Ireland might start factories of a similar nature with profit. Mr. Peters, the owner and manager of this factory, has taken a patent in England for his machinery; it could, therefore, be employed either by purchase or by royalty.

The turf at Langenberg is cut from the adjacent moor, and is brought by water in an undried condition, and can be used immediately. The turf, on coming from the moor, is thrown into the first breaker-machine, which resembles a large turnip-cutter, and is broken into small lumps. From the first it passes to the second breaker, and is ground into mull or a fine powder. From here it goes into the drier, a steam cylinder which is heated with the exhaust steam from the engine, and is perforated by tubes much in the manner of boiler tubes, but larger. This cylinder revolves, and, being on a gentle slope, the mull passes slowly through the tubes, and by this means becomes thoroughly dry. From the drier it passes to a hopper which feeds the plunger; this plunger receives the power of a 75 horse-power engine, and, by pressing the mull in a form against the preceding briquette, pushes them forward each stroke the width of a briquette.

The factory turns out 80 briquettes a minute, or 35 tons per day, with an average output of about 255,500 centners a year, or about 12,775 tons per annum, and the demand is far greater than the supply. The reason for this is that the briquettes are so marvellously cheap, an average price being 6½d. per 130 briquettes, or at the rate of at something like two briquettes for 1-10d. retail. This is certainly the poor man's fuel, as they burn slowly, but give a fairly good heat. In a closed oven, one briquette will remain in a glowing state for 24 hours; in an open grate it burns quicker, but remains alight for a longer time than any coal, giving a good red heat. The cost of working is comparatively low, as but few men are required to attend to the machinery. These men are paid on an average 3 marks (2s. 11½d.) per day, the engineer getting more. Women are employed to stack the briquettes in sheds. The cost at Langenberg of material and working 1 centner (112 lbs.) is 35 pf. (4¼d.), and per ton about 7s. With a more extended plant, Mr. Peters is of the opinion that this could be reduced to 5s. per ton.

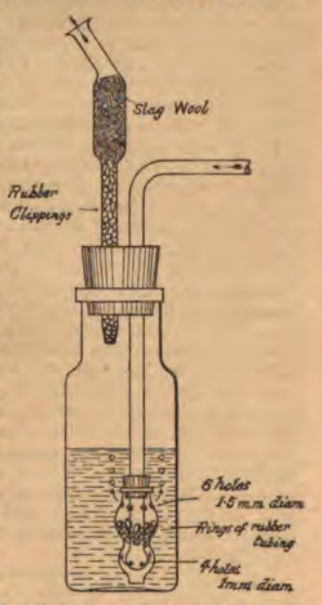
A Copper Mine on the Cork Coast.—What promises to be a most valuable copper mine has commenced working at Cappagh, on the Cork coast, about midway between Ballydehob and Schull. The presence of ore was discovered some forty years ago, but the discovery was not followed up effectively. Recently, Mr. Arthur Cave, the manager of the successful Barytes Mines in the district, had investigations made, with the result that a number of miners were set at work.

Stream Pollution in Cumberland.—At the Whitehaven Police Court this week the Whitehaven Hematite Iron and Steel Co., Cleator Moor, were summoned by the West Cumberland Fishery Board for permitting to flow into the River Eden from their catch-pond poisonous matter, whereby numbers of fish had been poisoned, one witness stating that he could have gathered basketfuls of dead fish. The defence was that the company were not to blame; it was the sewage from the Cleator Moor district that had got into the pond, thus causing the mischief. The defendants were convicted and fined £5.

TESTING ACID CONCENTRATOR EXITS.

THE uncondensable, but irritating, fumes which are given off in the concentration of vitriol have been the subject of reference in these columns from time to time (*C.T.J.*, No. 573, p. 333, *et seq.*), and have also attracted the special attention of the Chief Alkali Inspector (R. Forbes Carpenter, Esq.), on account of the difficulty of testing the escapes from acid rectifying plants by the usual bellows-absorption test. The Chief Inspector, reporting on this point, states that the white vapour, so irritant in its effect when discharged at a low level from the works, was extremely slow to enter into solution in the aspirator, even with prolonged shaking; various absorbents were tried. At the same time it was noticed, that if instead of the bellows aspirator the combination of two glass aspirating vessels used in gas sampling were adopted (on the large scale two carboys were in one case used for this purpose) and the gases allowed to stand for 45 minutes over water, the white fume entirely disappeared, and the absorption by the water of the acid gas left in the aspirator could be made complete by the addition of a little hydrogen peroxide, and by a very moderate amount of agitation. Unfortunately, this method was not one that lent itself for use by the inspectors where time has to be economised, and where many exits have to be tested in the course of the working day.

It was, therefore, thought desirable to investigate in the laboratory the conditions under which this white fume received its maximum development, and for this purpose strong sulphuric acid, to which a considerable addition of Nordhausen acid had been made, was heated in a retort, to which a Liebig condenser was attached; provision was made in the tubulure for admission into the straight tube of the retort of air, carbonic acid gas, sulphurous acid, or any other gas either moist or dry. The mixed vapours were subsequently passed over the surface of water and through a series of condensing bulbs containing caustic soda. When no gaseous admixture took place, the vapours condensed readily, confirming the experience on the large scale with rectifying retorts of platinum and of cast iron, when the latter are designed on lines similar to the former, access of air being excluded. The conclusions arrived at were, that formation of fume depended on the rate at which the dry or moist air, CO^2, SO^3, etc., were introduced, rather than on the nature of the gas used; the fume was carried through the apparatus. Experiments were then made on the best apparatus for absorbing this persistent white acid fume, and after various modifications and testing of these in actual works practice, the form which we illustrate was adopted. The object desired was to split up the bubbles of gas over absorbent surfaces, provided in this case by rubber clippings, the solution in the absorbing bottle being water and hydrogen peroxide. The gas is broken up into bubbles by passing through the holes pierced in the inner tube, and then comes into contact with the rubber clippings with which the space between the inner tube and outer perforated bulb is filled. The clippings are kept continually washed by the movement of the liquid through the apparatus, the opening in the bottom of the outer bulb being specially proportioned to promote this; before, therefore, the gases issue through the perforations of the outer bulb they have been submitted to a a very complete scrubbing. The enlargement of the exit tube of the absorbing bottle acts, in addition, as a final scrubber; this also is filled with rubber clippings, which are kept moistened with water coloured with methyl orange. By watching this tube as indicator during the progress of the aspiration, whether this is produced by the bellows or by a water aspirator, the passage of any acid vapour is immediately detected.



The sketch we reproduce is a shade less than one-quarter the actual size. This particular form is not put forward as a finality, as the testing of different forms of absorption apparatus led to some interesting variations in results which are to be the subject of further investigation by the alkali inspectors. Much also seems to depend upon the position, diameter, and direction of the tube drawing the sample, in its relation to the current of gases, all of which considerations have only been partially investigated at present. In the meantime, however, it will be a decided convenience and assistance to chemical manufacturers to know precisely what form of apparatus is at present in use for testing these *exits.*

THE LOSS OF NITROGEN IN DRAINAGE WATER

ALMOST from the commencement of the field experiments at Rothamsted 55 years ago the rainfall has been regularly measured, whilst the nitrogen as ammonia and as nitric acid, has periodically been determined in the rain waters. What is of even greater practical interest, the drainage waters from the soil have likewise been measured and analysed. Three drain-gauges, each of one-thousandth of an acre area, for the determination of the water percolating through 20, 40, and 60 inches depth of soil respectively, were constructed in 1870. The drainage through these several depths of unmanured and uncropped soil, in its natural state of consolidation, has been collected from September, 1870, up to the present time, a period of 28 harvest years. The results of the analyses of the drainage waters show the extent to which they are capable of robbing soils of their nitrogen, to supply plants with which farmers go to considerable outlay every year, and also the circumstances in which the loss may be greater or less. Over the 20 harvest years 1877-78 to 1896-97 there was an average annual loss of nitrogen in the drainage of 35·071lb. through 20in., of 30·831lb. through 40in., and of 33·871lb. through 60in. depth of soil. Taking the average of the three gauges the loss amounted to about 33lb. per acre per annum of nitrogen, corresponding with an annual average loss of nearly 2cwt. of nitrate of soda. A mere fraction of this would represent all the nitrogen brought down to the soil by rain; in fact, not more than about 5lb. would be contributed annually per acre from the atmosphere in rain and minor aqueous deposits, exclusive of any condensation by the soil.

Examination of the results for the four quinquennial periods of the 20 years 1877-78 to 1896-97 shows that the average annual loss of nitrogen per acre in the drainage was over the first five years considerably more than the average of the whole period, but over the second five years it was less than the average, and over the third five less than over the second. Over the last five years, 1892-93 to 1896-97, the loss somewhat exceeded that of the preceding quinquennial period. With this general decline in the loss of nitrogen in the later years, there was, on the other hand, in the eighth year of the 20 considerably more than than the average loss, in the ninth about the average, and in the 11th, 17th, and 20th years considerably more, and in the 18th year rather more than the average. Part of the excess in the 17th year was probably due to accumulation during the preceeding year of drought. In each of the last four years of the first 15, however, the loss was considerably below the average, and in the 16th year, 1892-93, a year of drought, there was, with nearly the lowest rainfall and drainage, also nearly the lowest loss of nitrogen in the drainage waters. It is instructive to note that in October of the 15th harvest-year, 1891-92, there was, with a great excess of rain and drainage, very much more than the average amount of nitric acid in the drainage water of that month. Only in one month of the preceding 14 years, indeed—namely, in September, 1880—was there more nitric acid passing through the 20in. gauge than in October, 1891. More pertinent still is the fact that in September of the harvest-year 1896-97 there was, with the heaviest rainfall and drainage ever recorded at Rothamsted for a single month, also the greatest loss of nitrogen as nitric acid by the drainage in any one-month of the 20 years.

Obviously, the loss of nitrogen as nitric acid through the soil drain-gauges has been very directly dependent on the amount and on the distribution of the rain and of the drainage. Although there seems to be some indication of a decline in the amount of nitric acid formed over the later than over the earlier years, the evidence is certainly not yet very conclusive. It is, however, estimated that during the 27 harvest-years ending with August 31st, 1897, there was a loss of nitrogen through the 20in. gauge of 13½, through the 40in. of more than 7, and through the 60in. of nearly 6¼ per cent. of the total combined nitrogen in the soil and subsoil. From the tables furnished by Sir Henry Gilbert in the 1898 report of the Rothamsted experiments, it appears that the loss of nitrogen per acre in the drainage waters of the 20in. gauge amounted to only 23·718lb. in the season of 1895-96, so memorable for its great crop of wheat, but that in the preceding year the loss amounted to 37·12lb., and in the succeeding year (1896-97) to 36·62lb.

The importance of such observations as these has its practical side in the attempts that may successfully be made to intercept the nitrogen which would otherwise escape in the drainage waters, and to utilise it for the purposes of plant nutrition. Where a crop such as autumn-sown wheat or winter barley occupies the land—and more especially where a catch-crop takes the place of a bare fallow—much nitrogen that would otherwise escape in solution in the drainage waters, and so become irrevocably lost, is thus intercepted and retained. This, indeed, is the salient principle which underlies the whole art of catch-cropping as successfully practised in this country. It would be very interesting to see the results from experiments, conducted on similar lines, with a selection of quick-acting nitrogenous fertilisers.

Reports of Companies.

THE ALUMINIUM CO., LTD.

The 11th ordinary general meeting of this company was held on Tuesday at Cannon-street Hotel. Lieutenant-General Sir Andrew Clarke presided, and, in moving the adoption of the report, said that, notwithstanding certain exceptional conditions which prevailed in respect of the working of the business at Oldbury during the year, the result of their trading for the period under review was satisfactory. The gross profit had been £17,189 The sum of £1,447. was brought forward from last year, of which £1,157. was used to write off the remaining expenses connected with the issue of the Four-and-a-Quarter per Cent Debenture stock, in place of the old Six per Cent. Debentures. After providing for the year's debenture interest, amounting to £3,825, and other fixed charges there remained £6,938, out of which the directors recommended a dividend of 10 per cent. should be paid on the A shares, absorbing £6,000., leaving £938. to be carried forward. The directors did not consider that it was necessary to write off any special amount for depreciation in respect of the past year. A considerable sum was expended during the period under review in putting the works in most efficient working order, otherwise a large part of such amount would have been added to the profits. Besides this a large share of the reserve fund was held by the company, and during the year a general reserve fund of £14,000. had been created, which could now be applied at any time to the necessities of the company for any purpose. Regarding the exceptional circumstances which had affected the amount of their profits, he observed that a great and favourable change occurred in a certain large chemical industry early in the financial year, in which industry a large portion of this company's sodium output was employed. To meet the sudden and somewhat unexpected demand the board deemed it advisable, as a matter of policy, to accept certain long contracts To fulfil these contracts they were obliged to carry on their manufacture under adverse conditions as to first cost, as everything had to be sacrificed to obtain the quantity of product. Had they not undertaken the business and accepted the situation when it arose their customers would either have been compelled to purchase abroad from this company's competitors, which would have given them an opening in England; or they would have been obliged themselves to use other methods of manufacture for their own products, not involving the use of sodium, in which case a certain and large demand for the company's sodium would have been done away with. That the board's policy of making some sacrifice during the past year had been correct was proved by the present position. By the putting down of additional plant they were able to meet their engagements fully, besides which they were now getting the advantage of normal and steady running, so that their first cost of manufacture was actually below what it had ever been. The board had entered into contracts with every important consumer of sodium in England running until the end of 1899, which ensured the sale of the whole of the company's output. The lawsuits which had been carried on both here and in Germany had been settled on terms favourable to the company. This result was accomplished early in July, and a rearrangement had been entered into with their former competitors which not only prevented any further lowering of prices by competition, but practically assured them of their present position. The arrangement also gave them several other important concessions. A new company had been formed to work their patents in Germany. The basis of the arrangement was that the German firm who had joined them in this enterprise should furnish almost all the cash necessary for the erection of the works against an equal value given to this company for their German patents. The share capital of the new company would be equally divided between this company and the German firm concerned, so that they would receive one-half of the profits The works, which would produce similar products to those now manufactured at Oldbury, were in course of erection, and it was expected that they would be in operation in January, 1899. The output had already been largely sold for the first year, so that the profits from that company should in future considerably augment this company's present income. The Castner-Kellner Company was working very satisfactorily, and it was announced at their last annual meeting that an interim dividend would probably be paid in October at the rate of 8 per cent. per annum. In view of this company's large holding in shares, such a dividend would alone mean almost 10 per cent. on their share capital in future. Respecting the Mathieson Alkali Works, the royalty of £4,000. per annum was now being paid. While the situation of the alkali trade generally in America had not improved during the year, there was some indication that a change for the better might be looked for at an early date. The business of the Niagara Electro-Chemical Co. was an exceedingly prosperous one. They had only received from it a dividend of 5 per cent. this year, as the directors of that company decided that the bulk of the profits of the first year should be used in writing down the amount expended on the works. He concluded by stating that he thought they had every reason to be satisfied with the present position and the prospects of the company. Mr. John S. Parkin seconded the motion, and, after some complimentary remarks from Mr. Bannister, as to the successful manner in which the board had built up the business of the company, the report was agreed to unanimously.

EUROPEAN PETROLEUM CO., LTD.

The second ordinary meeting of this company was held on Tuesday afternoon at Winchester House. Mr. Pollock, M.P., presided, and moved the adoption of the report, which showed a net profit, for the thirteen months ended June 30th last, of £27,396. He explained that the directors had taken legal advice with respect to the dividend on the preference shares, and were assured that they were right in proposing for the twelve months 6 per cent. on these shares, and 5 per cent. on the ordinary shares. In the report the directors had endeavoured to tell the result of each property belonging to the company. On the Baku property, in no case where they had sunk a well had they failed to find a satisfactory return. At Batoum they had erected a large storage place for oil, with the view of supplying steamers with oil wherever required; and this accommodation, however employed, must mean a revenue of thousands a year. The Grosney property could stand aside for the present. In Roumania the directors have appointed an eminent firm as their agents, and they had carried out their work satisfactorily. The product there was meeting expenses; but, following the example of others, the directors had determined to make a deep well, which was expected to be a profit to the company. The Admiralty was a customer to the Thames Haven refinery, which, he thought, would fulfil all that had been expected of it. In regard to the steamers, the directors had nothing to offer but congratulation. Since the report was issued, the directors had sold three steamers at a substantial profit. He concluded by expressing his confidence in the power of the company to earn a large net profit if they got more working capital.—Colonel English seconded the adoption of the report, which was agreed to after some discussion.

RUBBER ESTATES OF PARA, LTD.

The first ordinary general or statutory meeting of this company was held on Tuesday at Winchester-house. The Hon. J. A. de Grey presided, and, after expressing regret at the unavoidable absence of the chairman of the company (Lord Castletown), said this was the first English company formed to work rubber estates in Para. A slight delay had taken place in holding the meeting, as the board were anxious to be able to announce that all legal formalities had been concluded and the property transferred to the company. Unfortunately he was not yet in a position to make such an announcement, but the latest information received showed that no obstacles stood in the way of everything being settled. The total cash resources of the company amounted to £62,066. at the present time, out of which £46,570. had to be paid in cash towards the purchase of the property, leaving a balance of about £16,000. for immediate purposes as working capital. Guarantees were given for the provision of a further sum of £34,000 odd, so as to make up the working capital to £50,000. Since the prospectus was issued, the response by the public not being satisfactory, the directors thought it necessary to exact from the guarantors payments on account, and also that security should be given for their fulfilling their guarantees. Payments on account had been arranged, and charges had been executed of a kind to lead the board to consider themselves entitled to expect that the whole £50,000. cash working capital would come into their hands in due course. Judging by the reports received from the estates the board thought that the prospects of success were very satisfactory. Owing, however, to the present system of working it was possible that the profits in the first year would not be so large as in subsequent years. Replying to questions the chairman stated that the number of shares applied for by the public was 62,066. The property was to be taken over as a going concern. No consignments of rubber had yet been received, and could not be before the property was transferred to the company. The principal shipping season for rubber did not begin until October. No resolution, other than a vote of thanks to the chairman, was passed.

F. STEINER AND CO., LTD.

The first annual report of the directors of this company states that, notwithstanding the many adverse conditions with which the business has had to contend, the directors report a net profit, after providing the sum of £21,447. for repairs and depreciation of machinery, of £80,096. on the year's working. After the payment of twelve months' interest on the mortgage debenture stock and on the preference shares, the balance to credit of profit and loss account is £39,596 From this has to be deducted the interim dividend of 5 per cent. for five months on the ordinary shares, paid on December 31st last, viz., £9,896., leaving a balance of £29,700. The directors propose to make up the dividend on the ordinary shares to 6 per cent. for the year ended 31st July last, which will absorb a further amount of £18,604, leaving a balance of £11,096. to carry forward to the following year.

NOTES ON FOREIGN TRADE.

STETTIN.

Cement.—The Stettin Portland Cement Factory report that they had a good sale for their increasing produce during 1897. It appears that the demand for cement throughout the whole of the German Empire increased to such an extent that at times the efforts of the German factories could not keep pace with the demand. This Company sold off all the cement produced in 1897 and hold considerable orders for 1898. The Company declared a dividend of 20 per cent. The "Stern" Portland Cement Factory report that even at increased prices the demand continued so lively that they have no stock on hand left from 1897, and state that the demand from home being so great they had to limit their export abroad as much as possible. They employed 585 workmen and paid 471,172 marks (£23,210. 9s.) in wages, that is to say for each labourer per day an average of two marks 69 pf. (2s. 8d). The Stettin-Bredow Portland Cement Factory report that the results in cement as well as in brick-making during 1897 have been very satisfactory. They paid a dividend of 10 per cent., and paid in wages the sum of 252,488 marks (£12,437. 17s.) for 90,915 working days. The Stettin-Chamotte Factory Company report that their factory was very fully employed to meet a lively demand during 1897, and gave a considerable increase in the returns.

Fertilizers.—The "Union" Chemical Produce Factory report that in consequence of lower prices the demand for artificial manures has considerably increased during 1897. Thus, their sales rose from 5,410,375 marks (£266,521.) in 1895-96, to 5,897,912 marks (£290,537.) in 1896-97. They sold 68,194 tons of superphosphates, 35,842 tons of Thomas Slag; whilst 35,102 tons of sulphuric acid, 5,434 tons of potash, and 1,343 tons of bone manure were produced. The firm employed 588 hands (males and female) with average wages of 1,081 marks (£53. 5s.) each per annum.

Chemicals.—The import of phosphates to Stettin by sea amounted to 84,646 tons, and of pyrites 68,648 tons.

HAKODATE.

Sulphur.—The exportation of sulphur touched its highest point in the years 1887-91, when the average annual export amounted to about 17,000 tons. Since that time shipments have gradually decreased, until last year it amounted to only 6,723 tons.

Owing to the excessively high prices asked by holders, stocks here have accumulated to the extent of 6,500 tons during the past two years. This stock the owners have now been shipping on their own account. Inclusive of this accumulation, it is estimated that this year's shipments will probably be about 8,000 or 9,000 tons, after which the export is expected to drop to a maximum of 2,000 or 3,000 tons per annum.

With one trifling exception of no value, so far as export business is concerned, all the sulphur mines on this island and the northern mainland of Japan are surface volcanic deposits. The principal mines from which sulphur has been obtained are—Osoresan, in Rikuoku, Nambu, north mainland; Atosanobori, in Kushiro, Hokkaido; Sharesan, in Kitami, Hokkaido.

The two last mines have been exhausted, and rom the first-named only 200 or 300 tons per annum are now extracted.

The only mine of any importance now being worked in this district is that of Ponto, situated in Kunashiri, one of the Kurile Islands, on the north-east coast of Hokkaido, from which about 2,000 or 3,000 tons are produced annually.

A few other small surface deposits, yielding from 50 to 500 tons per annum, are being worked in this island and the Kuriles, but they are unimportant, and no information is to hand as to the discovery of any further deposits.

On the other hand, the Japanese home demand for sulphuric acid works and other objects is estimated at 2,000 to 3,000 tons per annum. Although reliable statistics on this point are not available, the demand is certainly increasing year by year in the country, and it would seem that, unless further and very extensive deposits are discovered, the foreign exportation of this article from Japan will soon virtually cease to exist.

The exports of sulphur during the year 1897 from this port to various countries were as follows :—

Destination.	Quantity. Tons.	Value. £.
United States	4,523	16,470
Canada	1,000	3,702
Hawaii	737	2,609
China.....	463	1,605
Total.....	6,723	24,386

Manganese.—Mining operations of manganese in this island began in 1894, and that year's output is given as 1,300 tons; the following year's, 5,700 tons; 1896, 7500 tons; and last year's, 5,200 tons, or 19,900 tons for the four years.

The mines are situated at Setanai, Aza Toshibetsu, at the head of Volcano Bay, and the deposits so far appear to be fairly extensive, whilst the ores, both peroxide and metallic, are of high grade. The following are a few of the latest analyses :—

Peroxide.		Metallic.
79·431 per cent.	.. .	51·506 per cent.
80·022 ,,	....	52·810 ,,
83·525 ,,	....	54·440 ,,
87·300 ,,	....	58 693 ,,
90·277 ,,	....	57·886 ,,
93 062 ,,	.. .	59·436 ,,
93·746 ,,	....	59·233 ,,

THE DISPOSAL OF DISTILLERS' REFUSE.

A £2,000. PREMIUM.

THE question of river pollution has long been troubling the Scotch distillers, and it appears that at length the proceedings in connection with the offering of a premium of £2,000. for the discovery of anything which will effectually settle the pollution question have now taken practical shape. The twenty-one representatives of distilleries who guarantee the sum, met in Elgin last week, and formally agreed to offer the amount mentioned. The following are the conditions under which it is to be given, and all competitors must sign them :—

The subscribers hereby offer a premium of £2,000. to a person devising and handing over to them for their sole use and behoof such a scheme for treating the bye-products of distilleries as will effectually purify them and be adopted by the Combination, and that on the following conditions, viz :—

1. The money shall not be paid (*a*) unless and until the Combination are satisfied by practical tests carried out by themselves or others authorised by them, that the scheme proposed satisfactorily treats all bye-products of distilleries, and for this purpose competitors shall be bound to place their scheme, if required, at the disposal of the Combination to be experimented upon by them, with the assistance of the competitor, either on a large or small scale, and that for a period of one year from the time the scheme is placed at the disposal of the Combination, or such longer or shorter period as may be agreed upon (*b*) Unless and until the Combination are satisfied that it can be accomplished at a cost which in the opinion of the Combination is reasonable.

2. Should two or more equally effectual remedies be devised by two or more different persons, the Combination shall have the power of deciding to whom the premium shall be awarded.

3. The power of selecting the persons who shall compete shall be in the absolute discretion of the Combination.

4 Samples of the bye-products will be placed free on rail to any person or persons the Combination may approve.

5. The premium shall not be paid unless and until the scheme is handed over to the Combination and vested in them as their absolute property.

6. All questions or differences arising between the Combination on the one hand and a competitor or competitors on the other hand, whether as to the meaning of these presents or any other question or difference, shall be settled by the Combination, who appoint themselves as sole arbiters for this purpose.

The firms in the Combination are :—

Thomas Vool & Co., Miltonduff Distillery, Elgin.
Glenlossie-Glenlivet Distillery Co., Ltd., Glenlossie, Elgin.
Gordon Smith, Cragganmore Distillery, Ballindalloch.
Glemoray-Glenlivet Distillery Co., Ltd., Elgin.
Craigellachie-Glenlivet Distillery Co., Ltd., Craigellachie.
Benrinnes-Glenlivet Distillery, Ltd., Aberlour.
Dailuaine-Glenlivet Distillery, Ltd., Carron, Strathspey.
Imperial Glenlivet Distillery Co., Carron, Strathspey.
North of Scotland Distillery Co., Carron, Strathspey.
Tamdhu Distillery Co., Carron, Strathspey.
Geo. & J. G. Smith, The Glenlivet Distillery, Glenlivet.
Parkmore Distillery Co., Dufftown.
George Cowie & Son, Mortlach Distillery, Dufftown.
Glenfarclas-Glenlivet Distillery Co., Ballindalloch.
John Walker & Sons, Ltd., Cardow Distillery, Craigellachie.
R. Thorne & Sons, Ltd, Aberlour-Glenlivet Distillery, Aberlour.
Balmenach-Glenlivet Distillery, Ltd., Ballindalloch.
The Speyside Distillery Co., Ltd, Kingussie.
Linkwood-Glenlivet Distillery, Ltd., Elgin.
Glentauchers-Glenlivet Distillery Co., Mulben.
Wm. Teacher & Sons, Ardmore Distillery, Kennethmont.

Borax Works Closed.—The Pacific Coast Borax Works, which are associated in this country with Redwood's Chemical Co., Ltd., have been closed down for an indefinite period. The plant, the largest of its kind in the world, was established in 1877.

NGINEERING ERRORS AT DAVYHULME.

AN IMPORTANT REPORT.

Rivers Committee of the Manchester Corporation held a special eeting in the Town Hall this week, when the members were d a considerable time in discussing a report of a sub-committee rors committed in the engineering work carried on at the Davy- ewage Works. The report, which was eventually adopted, and f which will be sent to the members of the City Council, with a lirection to the attention of the Town Hall Committee, enumerates ors made, and points out that the custody of plans and itions in the surveyor's department requires attention. The rveyor withdrew any imputation against Mr. Miller, who gave ance that he had neither signed nor removed any signature on n plan. The sub-committee are of opinion that the primary the errors is the lamentable disorganisation that exists in the ring department, and the lack of system that prevails in checking and supervising and signing plans. The interests of the Cor- are made subservient to petty jealousies. *Esprit de corps* xistent. By inconsiderateness of superiors irritation is caused, ior officials are constantly discouraged from pointing out errors not under their immediate charge or care. The sub-committee impress on the City Surveyor the necessity of a thorough re- ition of the work connected with the Rivers Department. It e impossible to bandy about the blame as has been the case in ent inquiry. Each official ought to be made responsible for the der him, and if such an official is not worthy of the position he e discharged. All plans and duplicates ought to be registered roper keeping. This inquiry has been hampered through plans cifications being lost. All important plans, by whomsoever pre- ught to be signed by the official who is responsible for figures ils, and countersigned by the City Surveyor or his deputy.

COLLAPSE OF A RESERVOIR.

TASTROPHE of a serious nature, though fortunatety unattended ith loss of life or personal injury, occurred at Messrs. Levinstein s Crumpsall Vale, Blackley, this week, in the collapse of the servoir from which a portion of the water used in the carrying he works is drawn. For some months past the Manchester tion have been constructing a main sewer in the neighbourhood, ts course this passes under the bed of the reservoir at a depth of about 6 feet, and through soil of a very shifty character. rk had practically been completed, and to all appearances ng had been made secure. All that remained to be done was he finishing touches to the brickwork in which the sewer pipes closed, and, whilst this was being carried out, the workings e reservoir were protected by means of timber. The reservoir an acre in extent, and in some parts is as much as 20 feet that an immense volume of water was contained within its When the workmen left, there was nothing to indicate the ty of any accident occurring, but later on the bottom of the r, at a point near the junction of Delaunay's Road and Cleveland nd immediately over the sewer, suddenly gave way, and within ew seconds the whole place was deluged. The surrounding r a distance of several yards around was washed away, and ith other debris was swept bodily into the river Irk, a distance 30 or 40 yards. The roads were rendered impassable, and the water mains were considerably damaged. Gas lamps tinguished in consequence, and the roadway between the r and the river sank to the depth of several feet. No , strange to say, appears to have been occasioned to the sewer hich remains intact, though, of course, the surrounding brick- s been knocked about a good deal. Fortunately, no one was at the time the accident occurred, otherwise there would edly have been loss of life to record, and, even as it is, it is at remarkable that so little damage has resulted to the sur- g property. As soon as the accident was discovered, one of poration watermen, H. Lewis, of 3, Luke-street, Cheetham, municated with, and he lost no time in getting a gang of men repairing the damage. They continued through the night, en o'clock the next morning had made considerable progress ng away the wreckage. The reservoir is completely emptied ntents, and it is stated that hardly ten minutes elapsed between symptoms of anything being wrong and the escape of all the to the river.

ACME SALT WORKS.—Messrs. J. Manger and Son inform us y have, for entirely family reasons, registered their firm as a iability company, under the title of J. Manger and Son, Ltd. nagement will remain in every respect the same as before, and s will be offered to the public.

WATER MUNICIPALISATION.

THE London County Council statistical department has compiled a return for presentation to the council, showing the advantage of a municipal supply of water. This report, which is a voluminous one, indicates that there are sixty-four county boroughs in England and Wales, and of these forty-three have a water supply in their own hands. In thirty-two of these the waterworks were purchased from a company, and the others were originally constructed by the corporation. Of the county boroughs without a municipal water supply only Bootle is supplied by another corporation—that of Liverpool—while the remaining nineteen are supplied by water companies, Salford being partially supplied by the city of Manchester. Among the cases given of the advantage of the purchase of waterworks is that of Manchester. The water Company's capital was £799,673. and the Corporation has since spent £5,456,373. on waterworks, a total of £6.256,046. on which sum the interest paid averages 3·3 per cent. The charge made to the bulk of the outside authorities for water supply is about 60 per cent. higher than in the city, not taking into account the water rate of 3d. in the pound levied in the city but not without. Salford at the time the Manchester Corporation superseded the Manchester and Salford Water Co , in 1851, took over that portion of the works within the borough, and agreed to take 1,500,000 gallons daily, at a cost of £6,500. per annum. It has since spent £62,453. on waterworks account. Bolton purchased from a company in 1847, at a cost of £89,428., and has since spent £666,447. ; Bury spent £250,081. originally and £280,974. since, the rate paid to original shareholders being 7·6 per cent , the average interest now paid on the total capital being 5·3 per cent. Oldham by purchasing agreed to pay 10 per cent. on the capital of £52,600. which the old water company had, and has since spent £979,841. on new works, bringing the rate of interest paid down to 3·7. In Manchester a public rate of 3d. in the £ is levied on the landlords, and collected direct from them as an owner's charge. As in Liverpool, the Corporation has taken over the repair and ownership of pipes laid between the house boundary and the mains. Bury meets its deficit partly out of a special rate and prrtly out of a borough rate, and Rochdale entirely out of the borough rate. This deficit is in the latter case being gradually overcome. In only three cases—those of Oldham, Blackburn, and Northampton—is the charge for water higher than it was before the works were purchased from the companies, and in these cases the increased rate is due to the construction of new works not completed.

IN FAVOUR OF BACTERIAL SEWAGE TREATMENT.

THE BLINDNESS OF THE LOCAL GOVERNMENT BOARD.

THE Council of the North-Eastern Sanitary Inspection Association, in their annual report, claim that the progress made with regard to sewage disposal is the event of the year in the sanitary world. The report goes on to say that bacteriolysis as a charmingly simple and cheap, as well as the final, solution of this problem which has sorely vexed and bled this generation is, happily, at length recognised by all whose eye is single. Vested interests or other defects may continue to obscure the vision of some for a little while longer, but they must soon hide their diminished heads. Nature's armies of organisms are irresistible, because they are everywhere at command, in whatever number they may be required or can be employed, while their requirements are incredibly simple. The pioneers or liquefiers who tear up or break down solids only require protection from the elements to do their work thoroughly, which, in large schemes, is to pave the way for their brethren the nitrifiers who resolve organic matter into its harmless constituents, and only require regular and adequate supplies of air. The workshops of both classes are very small.

THE POWER OF BACTERIA.

The realisation of the power of bacteria in this domain during the past year has been very rapid and extensive, and threatens to overwhelm the Local Government Board, which already has had to fly for protection to Parliament. Accordingly a Royal Commission has been appointed to inquire into and report on these ongoings. If it recognises the beneficence, capacity, efficiency, and economy of bacteria working in small tanks and cinder beds for the sweetening of human life and its rivers it will pave the way for an Act granting them autonomy—Home Rule—and abolishing the land question or imposition of the Royal Commission of 1866. Under this latter the Board now finds that it can no longer work in peace—the whole country having risen in rebellion, declining to buy, for sewage bedding, large areas of land (which is not only very limited and costly in this tight little island, but is also the most inefficient), while ready to provide the little that bacteria really require for their work.

POSITION OF THE LOCAL GOVERNMENT BOARD.

Ludicrous to some—pathetic to others—is the quandary in which the Local Government Board now thus finds itself, through blind insistence on land all these years and the enormous waste of money it has thus forced upon local authorities who must now in their own interests abandon it—maintenance thereof being a serious and needless burden—even if they do not sue the Local Government Board for damages for misdirection. The report further says that it is a very serious matter—a wholly intolerable one—that any department of Government should be able to obstruct and misdirect public business as the Local Government Board has done in the matter of sewage disposal for the past thirty years.

Trade Notes.

A New "Dangerous Trade."—The Home Secretary, acting under section 8 (1) of the Factory and Workshops Act, 1891, has certified that the dusting of colours on adhesive surfaces for the purpose of making transfers for use in the manufacture or decoration of earthenware and china to be dangerous or injurious to health. This renders the occupiers of factories or workshops where such processes are carried on liable to be called upon to adopt special measures to meet the necessities of the case.

Personal.—The directors of Thomas Hedley and Co, Ltd., of the City Soap Works, Newcastle-on-Tyne, have elected the general manager (Mr. Bertram Philipps) to be a director.

Factory Acts Prosecution.—At the Manchester Police Court last week, before Mr. Headlam, the Manchester Novelty Company, india-rubber manufacturers, of Clayton Lane, were fined £5. and costs for neglecting to comply with special rules established in their factory. The Company had failed to cause the persons working in rooms where bisulphide of carbon (a highly poisonous substance) was used to be examined once a month by the certifying surgeon.

Fatal Accident at a Blast Furnace.—Last week an accident of a terrible description occurred at Bolckow, Vaughan, and Co.'s blast furnaces, Southbank, near Middlesbrough. Without any warning the top of a large copper stove, used for heating the blast sent into the furnaces, suddenly flew off, and tons of red hot bricks and masonry were hurled in all directions, the top of the stove, weighing several tons, being hurled a distance of thirty yards. Two men were killed and many others injured.

A Lightless Town.—The stokers at Llanelly Gas Works came out on strike on Wednesday, alleging that the manager had completely ignored an old standing rule that workmen should have seniority of positions according to length of service. The foreman of one turn was discharged for the alleged theft of coal, and the second hand in another turn was appointed to fill his place. The strikers maintain that the discharged foreman's brother, who was second in that turn, ought to have had the position. As the storage was very low the town was in semi-darkness.

Compensation for Subsidence through Brine Pumping.—At Northwich on Monday the Compensation Board formed for exercising the provisions of the Acts for compensating the owners of property damaged by subsidence through brine pumping met for the purpose of making a new rate, to be levied on brine pumps within the registered area. It was decided to levy a call of 3d. for every thousand gallons of brine pumped, which is the largest amount allowed under the Act, and the gross amount will be sufficient to meet all demands made by property owners.

Obituary—Many readers will regret to learn of the death of *Mr. A. M. Chambers, J.P.*, of Belmont, Chapeltown, near Sheffield. He was visiting Scarborough for a few days, and the sad event was totally unexpected, creating the greatest surprise in Sheffield and district. Mr. Chambers was managing director of the firm of Newton, Chambers, and Co., Limited, proprietors of the Thorncliffe Collieries and Ironworks; he was president of the Coalowners' Federation of Great Britain and chairman of the Yorkshire Coalowners' Association. Mr. Chambers was one of the best-known men in the coal and iron trades of the country, and he played a very active part in the great coal dispute of 1890. We also learn this week that *Mr. Arthur Pease, M.P.*, died at ten o'clock last Saturday night, at Callington, Cornwall, after a prolonged illness, which attacked him during the progress of the recent Launceston election. The cause of death is understood to be attributable to heart weakness. Mr. Pease was a member of most local bodies, and was Mayor of Darlington in 1873. He was a member of the extensive firm of Pease and Partners, and was the grandson of Mr. Ernest Pease, founder of the first passenger railway. He was also a member of the Indian Opium Commission.

The Resin Market.—There is a decidedly firmer attitude of the markets, with slightly higher prices for all grades. "Pales" appear to hold quite a strong position with substantially higher prices; "medium" show a slight advance, and the rapid decline in common resin has been checked. The steamer freight rates from the American ports are, as usual at this time of the year, becoming less favourable to resin shipments. In London the market has been steady, with a fair quantity of business. "Pales" have not been in strong demand, but there has been a good business in medium and common grades. The Liverpool market has also experienced a steady trade. Offerings by steamer have now practically ceased there, and there is a good deal of inquiry for resin on the spot.

Boracic Acid as a Preservative.—Birmingham grocers are greatly perturbed concerning the action of the city health authorities in instituting prosecutions against tradesmen for using boracic acid as a food preservative. A deputation recently made an unsuccessful effort to extract a pledge from the Health Committee that no proceedings would be taken until a definite standard had been fixed upon by the Local Government Board. The matter was discussed at considerable length at a meeting of the Grocers' Association on August 22nd, when a resolution was passed expressing the opinion that Corporations and local bodies should not take action until it was definitely settled whether boracic acid might be used or not. The members of Parliament for the district are to be asked to impress upon the Government the urgent necessity of setting up a national limit of the percentage of boracic acid to be used by trades in the preservation of foods.

Californian Citric Acid Factory.—General Manager Boal, of the San Diego Land and Town Co., states that steam was up at the company's new citric acid factory in National City for the first trial of the plant, during which test 3,000 or 4,000 boxes of culls would be treated. We referred to the approaching completion of this factory in a recent issue. The superintendent of the factory is Eldridge Baker, of Lawrence, Mass., one of the most experienced chemists of the East, and the inventor of a number of successful chemical processes. The lemons will be treated by a secret process, although it is understood the factory will undertake to furnish the market with citric acid and with simple lemon juice. The present capacity of the factory is 10 tons of lemons daily, but this output can be easily enlarged. It is estimated by the company that at least 10 tons of fruit can be handled daily throughout the year, and that the supply of culls will, at certain seasons, exceed this amount. The factory consists of a two-storey building 50 by 114 feet. In the second storey the tanks and much of the acid-making machinery have been located.

Pattern Cards.—The great colour works in Germany are notable on account of the large number of pattern cards which they issue from time to time as guides for dyers and colourists in the use of their products. We have received quite a large parcel of such cards from Messrs. Cassella and Co., of Frankfort on Main, which we feel sure will prove valuable to those who receive them. The cotton dyer will be interested in two book cards containing between them 300 patterns showing the use of the firm's diamine colours in dyeing of cotton, with accompanying descriptive letterpress. Then there are two cards for the union dyer, one of linings in shades which are fast to hot pressing, an important feature in some fabrics, and the other of the fabric known as cotton warp Eskimo. The silk dyer has presented to him a small pamphlet showing the use of a few of the diamine colours when coupled with nitrazol C in the dyeing of fast shades on silk. The wool dyer is not neglected, one card shows 120 shades fast to milling, a point that the wool dyer often wishes to attain. A card of 226 patterns shows how all the shades which are to be fashionable this autumn can be got from the firm's products. The carpet dyer will be interested in a card of dyeings on yarns which are fast to light, while, lastly, a small card shows the use of the anthracene acid dyes in producing shades fast to milling. It is by such means that the firm keep their name before the users of their products.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are moving gently at 9½d. for 90's and 50/90's, but only urgent sellers are willing to operate. In other products there are no quotable changes in prices to record, but the tendency of solvent naphtha is towards a decline. Crude keeps about the same. Carbolic acids are quiet, but fairly steady at last week's figures. Anthracene is lifeless at recent quotations. Pitch steady at 24s. to 25s. f.o.b. East Coast.

Sulphate of Ammonia maintains its position satisfactorily in the existence of short supply. There has been a slackening tendency in the market during the last few days, but so far prices keep at much the

level. For prompt, Beckton is still quoted £10. 5s., and London le makes also £10. 5s. Liverpool now stands at £10. 3s. 9d; the bare £10.; while Leith ranges from £10. 1s. 3d. to 3s. 9d. Forward business dull.

MISCELLANEOUS CHEMICAL MARKET.

siness generally in the alkali trade continues rather quiet, and are no changes to report in prices of the staple products. For ic soda there is rather more enquiry for export, but current tions are unaltered—viz., f.o.b. Liverpool, 77% £8.; 74% £7. 15s.; £7. 2s. 6d; 60% £6. 2s. 6d. nett (10-ton lots). Ammonia alkali, £4. 2s. 6d. bags, f.o.r. makers' works. Bleaching powder for t is quoted at £5. 10s. to £5. 15s., hardwood casks, f.o.b., and ome trade £5 to £5. 2s. 6d. softwoods, free on rails. Soda ils and bicarbonate are steady and prices unaltered. Recovered ur firm at £4. 12s. 6d. bulk, f o r. Chlorates unchanged; potash 6d.; soda, 3½d. per lb. Sulphate of copper is in fair demand and well maintained at £16. 10s. f.o.b. for prompt, £17 f.o.r. forward ery. Saltcake in good request and firm in price at 25s. per ton makers' works. There is a better market for white powdered ic, and price is firm at £15 Garston with good enquiry. Yellow iate of potash is a shade firmer for prompt delivery, and quoted ½d. per lb.; cyanide, 1s 1d. per lb. Potash, caustic and nate, are in good request, and values are unchanged. Nitrate of is a steady market at 7s. 7½d. to 7s. 9d per cwt. Acetate of brown, steady, at £5. c.i.f.; grey. £7 per ton. For acetic n all qualities, prices generally are rather lower. Acetate of lead at £26 c.i f,; nitrate, £20. per ton. For carbolic acid, crystals iquid, the demand is light and prices are unaltered. Aniline oil alt are rather easier at 5¼d. and 4¾d. per lb. respectively.

REPORT ON MANURE MATERIAL.

e market remains firm in all branches, but there is not much of al importance to comment upon.

neral phosphates continue to be enquired for on the Continent, arther sales have been made of high-grade rock at extreme prices. d Kingdom buyers being under no necessity to purchase are not ing the advance.

nsiderable sales of East Indian Bone Meal have been made to on and the East Coast at the parity of £4. 10s. per ton delivered, igher prices are now asked.

rate of soda is unchanged, 7s. 7½d per cwt. being the quotation dinary quality, and 7s. 9d per cwt. for refined.

THE METAL MARKETS.

ONDON, WEDNESDAY.—Pig iron quiet: Scotch warrants at 47s. 2½d.; Middlesbro', 42s. 7½d cash; and hematite, ½d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed 12s. 6d. to £51. 17s. 6d. cash, and £51. 16s. 3d. to £52. 1s. 3d. months Tin flat: Straits closed at £72. 5s. to £72. 15s. and £72. 5s to £72. 15s. three months; Australian, £72. d.; English ingots, £75. to £75. 10s Lead firm: Spanish, 17s. 6d.; English, £13. 2s. 6d; Silesian spelter, ordinary, 17s. 6d. Nickel, 1s. 2½d. Antimony, £37. Quicksilver: hands, £7. 12s 6d.; second hands, £7. 11s 9d. *Copper shares* Cape, 4⅝ to 4¾; Copiapo, 2⅞ to 2⅞; Libiola, 1⅞ to 2⅛; n and Barry, 3⅛ to 3⅜; Rio Tinto, 28⅜ to 28¾; Tharsis, 6½

ASGOW, WEDNESDAY.—Market steady, and a small business; n done at 47s. 2½d. cash; and 47s. 5d. month; buyers, ½d. cash; sellers, 47s. 3d. Cleveland, buyers, 42s. 7½d. cash; , 42s. 8d. Cumberland hematite done at 52s. 9½d. cash, and month; buyers, 52s. 9½d. cash; sellers, 52s 10d. Middles- h hematite, sellers, 52s. 3d. cash.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

LS.—Palm oil is nominal in price, while the demand is rather Olive is steady on spot and fairly well sought for. To arrive vance in Spanish has retarded business. Linseed is well held at 18s. 6d. per cwt. for Liverpool makes in export casks, though the y is only moderate. Cottonseed is firm at 16s. to 16s. 3d. cwt. verpool refined. Castor oil is quiet, but steady, with good ls Calcutta at 3¼d. and first pressure French 3 1/16d. per lb. Tallow is quiet, and in poor request, but prices are fairly well maintained. Resin keeps steady at full rates. Spirits of turpentine are quoted 22s. 6d. per cwt., at which holders are steady. Petroleum unchanged; Russian offering at 5d., and American 5¼d. to 7¼d. per gallon.

CAKES.—Owing to the firmer advices from the United States there is a better feeling apparent in West American linseed, and at market a very firm tone prevailed for spot parcels, with a good business concluded at an advance of fully 2s. 6d. on recent rates, the closing value being given at £5. 18s. 9d. to £6. 5s.; Liverpool makes also experience rather more inquiry, and the tone is firmer, with prices partially 5s. dearer at £7. 5s. to £8. per ton, according to brand. Good to choice brands of American decorticated cottonseed cake are a shade steadier in tone, but there is not much business doing at £5. 7s. 6d. to £5. 15s., according to quality, whilst Liverpool makes are selling to a moderate extent at last week's rates, viz, £5. 15s. to £6. 16s. per ton, according to brand. Undecorticated Liverpool makes are the turn in seller's favour, and move off steadily at £3. 16s. 3d. to £4. 5s., according to brand, but there is nothing of note doing in spot parcels of Egyptian, though there are still sellers at the recent quotation of £3 15s. per ton for prime quality, in store.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

In the general market there are no new features of any note, and the feeling is much too quiet a one in the views of the manufacturers. The great heats had been interfering with certain sections of the output; but there is by this time the promise of more normal conditions of temperature Sulphate of copper is perhaps a shade easier, at about £16 10s. The boom in sulphate of ammonia does not appear to have fully exhausted itself yet, for there is a further advance since this day week, and £10. 5s. prompt, f o.b. Leith, is the present value, with the possibility of a still higher mark. Mineral oils and paraffins all steady in the recent formation, and makers' stock of burning oil well sold forward for the season.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s 6d. to £4. 15s nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 15s. od. 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 25s. od.; borax, English refined, £13. 10s, and boracic acid, £25. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d, and 1-cwt. casks, £6. 15s. nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d. nett, f o.b. Glasgow); chlorate of potash, 3½d. less 5%, Liverpool; nitrate of soda, 7s. 7½d. to 7s. 9d.; sulphate of ammonia, £10. 5s. od. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £16. 10s. od. less 5% Liverpool; paraffin scale, hard, 1⅜d. to 1½d. per lb., and soft 1½d per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 6d., and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. os., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 122,508 mats cane unrefined; 16,681 bags and 146 casks beet unrefined.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Values since a week ago have not been fully maintained, yet present values are steady for linseed and cotton oils. The harvest around here appears to be in a forward condition, and already the new corn is being taken to the mills, but the value of grain at this time of the year is not equal to prices ruling last year at the same time. The imports to date, as against the same time a year ago, have been:—Wheat, 1,905,456 qrs. against 1,484,549 qrs; flour, 167,145 cwts. against 249,888 cwts; linseed, 233,616 qrs. against 416,574 qrs.; rapeseed, 54,642 qrs. against 56,991 qrs.; cottonseed, 124,345 tons against 127,817 tons; oilcake, 8,904 tons against 7,223 tons; olive oil, 4,168 tuns against 3,289 tuns; tar, 2,324 barrels against 5,229 barrels. Linseed oil is steady at 15s. 9d. per cwt., spot naked; 15s. 3d.

September/December, and 15s. 1½d. first four months of next year. Boiled and refined, £1. to £1. 10s. per ton, extra. Refined cotton oil steady, spot naked, 13s. 7½d., to 13s. 9d. per cwt.; forward, 13s. 1½d, rather buyers, Nov /April; crude ditto, spot, being quoted 12s. 4½d. naked. Olive oil of slow demand from £30. per tun for Spanish oil. Castor oil, extracted here, £28 10s. per ton in barrels: first pressure and in cases 3⅝d. per lb.; second pressure, £27. 10s. in barrels, and 3⅛d. per lb in cases Tallow, very little offering, with value £21. per ton for home melted. Olive oil soaps unchanged. Cod oils, £16. to £18 per ton. Resins unchanged.

CAKES.—The mills here are rather better employed. Linseed cakes very quiet, but prices remain firm. 95% pure, £7. 7s. 6d. to £7. 10s. per ton. Oilcakes (linseed), £6. 7s. 6d. to £6. 10s; Russians, £6. 17s. 6d. to £7.; Americans, £6. 12s. 6d. Cotton cakes firm, demand limited; best makes, £3. 18s 9d. to £4; seconds, £3. 17s. 6d. Rape cakes unchanged.

PAINTS.—Some makers here are well employed, whilst others are not so busy. Prices fluctuate little, ordinary colours in oils being quoted from £10. per ton upwards Dry colours, £3 to £7. per ton. Disinfectant carbolic powders: 20%, £4. 10s.; 15%, £4. 5s; 10%, £3. 15s. Sanitary fluid from 1cd per gallon. Black varnish, £5. 10s. per ton.

TYNE CHEMICAL REPORT.

Tuesday.

Market continues very quiet and chemicals only in fair demand. Soda crystals, £2. 12s. 6d. per ton, gross weight, locally. Caustic, 70%, £7. 5s. per ton; 76/77%, £8. per ton. Sulphur £4. 15s. per ton. Other prices unchanged.

Bleaching powder, softs, £5. 10s. per ton, nett; do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8. to £8. 5s. and 70% £7. 5s. to £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. per ton nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The market is quieter to-day and prices a shade easier in view of the probable early resumption of work in the Welsh coal district. Prices to-day are:—Best Northumbrian steam, 13s. 6d. to 14s. per ton; second qualities, 12s 6d. to 13s. per ton; small steam, 8s. 3d. to 8s. 6d. per ton; bunker coals, 9s. 6d. to 10s. per ton; gas coals, 10s. 0d. to 10s. 6d. per ton; coke steady, 18s. 6d. to 21s. per ton.

New Companies.

G. & L. Ware, Ltd.—Capital £200. in £1. shares. This company has been formed to carry on the business of corn, hay, coal, salt, forage and cement merchants, manufacturers of and dealers in foreign and colonial produce, fruit, flour, and vegetable merchants, oil and colour merchants, house property and general agents, etc. Registered office, Southcote-road, Bournemouth.

Martini Ozone Co., Ltd.—Capital £10,000. in £1. shares. This company has been formed to acquire certain patent rights in connection with improvements in vacuum dielectrics, electrodes and apparatus for the production of ozone or for the employment of ozone for curative and other purposes, to adopt an agreement with D. Martini, and to carry on the business of chemists, druggists, cycle and motor car manufacturers, oil merchants, manufacturers of explosives, electrical, mechanical, and general engineers, tube makers, etc. The number of directors is not to be less than 2 nor more than 5. The first are, D. Martini and J. D. Massey. Qualification, £100. Remuneration, £100. each per annum. Registered office, 8, Princes-street, E.C.

J. Manger & Son, Ltd.—Capital £10,000 in £10. shares. This company has been formed to acquire and carry on the businesses carried on by J. A. Manger, at 57d, High-street, Kingsland, at Ridley-road, Dalston, and elsewhere, as John Alexander Manger, at Farringdon-road as John Herbert, and at St. Stephen's-road, Bow, as J. Manger & Son, and to carry on the business of salt and soda manufacturers, drysalters, etc. J. A. Manger is the first managing director with £350 per annum, and may retain office so long as he holds shares to the value of £500 Registered office, 57d, High-street, Kingsland.

Northampton Tanning Co., Ltd.—Capital £40,000. in £10. shares (2,000 pref.). This company has been formed to carry out the objects as indicated by the title. The subscribers to the memorandum of association are:—C. E. Parker, Penketh Lodge, near Warrington, tanner; R. H. Posnett, The Mount, Runcorn, tanner; R. Garnett, Hall Nook, Penketh, Warrington, cabinet maker; W. Walker, Oak Lea, Whitehaven, tanner; W. A. Posnett, 239, Long Lane, S.E., leather manufacturer; C. Heal, Park-road, Northampton, tanner; Helen Parker, Penketh Lodge, near Warrington. Registered office, St. James-st., Northampton.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 20th.

Acetic Acid—

Holland,	50 pks.	R. W. Greeff & Co.
,,	50	Phillipps & Graves
,,	70	A. & M. Zimmermann

Acetone—

Germany,	21 pks.	D. T. Domeier & Co., Ld.

Alkali—

France,	120 c.	J. Barber & Co.
Holland,	90	,,

Ammonia—

Germany,	£100	R. W. Greeff & Co.

Antimony Ore—

Japan,	54 t.	Fielder & Co.

Arsenic—

Germany,	40 pks.	G. Boor & Co.

Asbestos—

Italy,	£300	Pickford & Co.
France,	7	Mory & Co.
,,	60	J. Coppo & Co.
Canada,	50	Milwall Dck. Co.
Italy,	393	Imperial Asbertos Co.

Barium Nitrate—

Holland,	£75	S. E. Rly. Co.

Barytes—

Germany,	95 pks.	Wilkinson, Heywood & Co.
,,	90	W. Harrison & Co.
Holland,	336	,,
Belgium,	217	,,
,,	37	J. L. Lyon & Co.
,,	83 brls.	O'Hara & Hoare

Bleaching Powder—

France,	108 pks.	J. M. Steel & Co.
,,	108	W. E. Cole

Bone Meal—

E. Indies,	200 t.	A Hunter & Co.

Caoutchouc—

France,	69 c.	H Johnson & Sons
Thursday Is.,	8	McIlwraith, McEacharn & Co
Germany,	300	Prop. Bull Wf.
E. Indies,	9	J. W. Cook & Co.
,,	70	S. Figgis & Co.
Holland,	150	J. Barber & Co.
Straits,	260	Soundy & Sons
,,	25	Elkan & Co.
,,	130	Butler's Wf., Ld.
,,	711	L. & I. D. Jt. Co.
Madagascar,	7	,,
M'zambique,	15	Forbes, Forbes & Co.
France,	21	Procter Brs.
,,	8	Prop. Bull Wf.
Straits,	201	Gilman Brs & Co.
B. Guiana,	14	Lewis & Peat
Zanzibar,	115	L. & I. D. Jt. Co.
Straits,	800	H. W. Jewsbury & Co.
B. Honduras,	2	Prop. Bull Wf.
,,	3	Major & Field

Carbolic Acid—

Germany,	160 pks.	J. G. Back

Castor Oil—

E. Indies,	10 cs.	Perkins & Homer
Italy,	25	Barron, Harveys & Co.
France,	15	L. & I. D. Jt. Co.
,,	40 pks.	F. Boehm

Caustic Potash—

France,	20 dms.	Petri Brs.

Chemicals *(otherwise undescribed)*

Germany,	45 pks.	R. W. Greeff & Co
,,	£1,804	A. & M. Zimmerman
Belgium,	10	John Cockerill Line
Germany,	13	J. Barber & Co.
France,	55	Mory & Co.
Belgium,	87	T. Palmer
,,	93	T. H. Lee
Germany,	158	,,
Holland,	14	R. W. Greeff & Co.
Belgium	20	C. Atkins & Nisbet
Germany,	50	Craven & Co.
,,	1,031	L. & I. D. Jt. Co.
Holland,	102	J. Barber & Co
Italy,	130	J. Burdon & Co.
Germany,	8	Petri Bros.
U. States,	150	Seaward Brs.
Germany,	6	Butler's Wf., Ld.
Holland,	98	A. & M. Zimmermann

Creosote—

Belgium,	6 pks.	E. Catlin

Cream of Tartar—

France,	5 pks.	B. & F. Wf. Co.
Portugal,	5	,,
France,	1	Vokins & Co
,,	8	F. C. Devon & Co.
Belgium,	4	W. Caudery & Co.
Spain,	39	A. Owen
,,	5	W. C. Bacon & Co.
,,	5	B & F. Wf. Co

Dyestuffs—

Aniline

Holland,	4 pks.	R. Baelz & Co.

Argols

Italy,	19 pks.	Thames S. T. & L Co.

Cochineal

Canaries,	5 pks.	Swanston & Co.
,,	4	Sperling & Williams
,,	44	W. M. Smith & Sons

Cutch

Straits,	1,150 bxs.	J. Swire & Sons

Divi Divi

Ceylon,	31 pks.	Forbes, Forbes & Co.

Extracts

U States,	50 pks.	W. Burton & Sons
France,	41	Bailey & Leetham Ld.
Holland,	36	J. Norrenberg & Co.
Austria,	203	Boutcher, Mortimore & Co.
U. States,	11	L. & I. D. Jt. Co.
France,	200	T. H. Lee

Gambier

Straits,	228 pks. 238 bls.	Brinkmann & Co.
,,	405	G. R. Haller & Co.
,,	256	Bellamy's Wf.

Indigo

E. Indies,	20 chts.	L. & I. D. Jt. Co.

Logwood

B. Hndras,	199 t.	W. Shelcott

Myrabolams

E. Indies,	2,000 pokts.	W. Shelcot
,,	1,000	Montgomerie & Workman

Saffron
Spain, 2 pks. L. & I. D. Jt. Co.
Shumac
Italy, 50 pks. Boutcher, Morti- & Co.
" 150 J. Graves
" 100 bgs. A. Slator & Co.
" 10 T. Harris & Co.
" 300 pks. Bailey & Leetham. Ld.
Tanners' Bark
Adelaide, 100 t. H. Devitt & Co.
Natal, 55 Boutcher, Mortimore & Co.
Holland, 30 Hicks, Nash & Co
Turmeric
China, 100 cs. Eastwood & Holt
E. Indies, 462 L. & I. D. Jt. Co.
" 231 H. A. Lichfield & Co.
China, 500 Anderson, Weber & Smith
E. Indies, 120 Brown & Elmslie
" 92 Ekan & Co.
" 41 pks. Major & Field
Valonia
A. Turkey, 20 t. M. Dk. Co.

Dyestuffs *(otherwise undes.)*—
Portugal, 4 pks. F. Knowles & Co.

Farina—
U. States, 69 cs. W. Wingate & Johnston
Holland, 50 pks. J. Barber & Co.
" 50 Dunlop Brs. & Co.
Italy, 25 C. Tennant, Sons & Co.
U. States, 98 Beck & Pollitzer
Holland, 50 T. H. Lee
Belgium, 45 "
" 20 Pearce, Duff & Co.
" 40 J. Barber & Co.
E. Indies, 68 J. W. Cook & Co.
Holland, 75 J. Knill & Co.

Ferric Oxide
Persia, 245 t. A. Frey & Co.

Glucose—
U. States, 102 pks. 668 cwts. L & Til. L. C. & D Co.
Germany, 200 200 Baxter & Hoare
U. States, 100 600 Page, Son & Easte
" 750 1,375 Ohlenschlager Brs.
" 35 200 A. E. Pigott
" 2,786 11,470 R. G. Hall & Co.
" 1,000 1,000 L. Norman & Co., Ld.
" 250 250 J. Barber & Co.
" 250 250 Pearce, Pelly & Co.
" 250 250 Trier, Meyer & Co.
Canada, 250 250 "

Glue—
Germany, £600 Deering & Robottom
" 38 Craven & Co.
France, 360 J. Barber & Co.
Holland, 107 T. H. Lee
Germany, 30 L. & I. D. Jt. Co.
U. States, 25 "
France, 100 Burnett, Brs. & Sons
" 100 Prop. Hay's Wf.
Holland, 1 Phillipps & Graves
Belgium, 10 T. Ronald, Son & Co.
" 468 J. Barber & Co.
U. States, 40 H. Grey, Jr.
Germany, 87 Milwall Dk. Co.

Glue Stock—
Germany, 293 bls. W. Balchin, Ld.
E. Indies, 100 J. W. Cook & Co.
Germany, 141 Butler's Wf., Ld.
U. States, 290 bgs. Baxter, Schenkelberger & Co.
Germany, 49 Hicks, Nash, & Co.

Glycerine—
France, £650 H. Hill & Sons

Guano—
Belgium, 234 t. Anglo-Contl. Guano Wks.

Gypsum—
France, 500 t. Hollinghurst & Co.
Germany, 10 L. & I. D. Jt. Co.

Manganese—
Japan, 300 t. A. B. Curtis & Co.
Germany, 22 Butler's Wf., Ld.
France, 6 c. Pickford & Co.

Manure—
U. States, 4 t. L. & I. D. Jt. Co.
Germany, 58 R. W. Greeff & Co.

Mercury—
Italy, 100 flsks. H. Bath & Son
Spain, 37 btls. L. & I. D. Jt. Co.

Methyl Alcohol—
Austria, 21 pks. Stein Brs.
France, 20 cks. E. Catlin

Mica—
E. Indies, £570 W. M. Smith & Sons
France, 66 H. Ewald & Co.
E. Indies, 185 A. B. Curtis & Co.
" 120 Dundee, Perth, & London S. Co.

Mineral White—
Italy, £30 Bellamy's Wf., Ld.

Molasses—
B. Guiana, 200 cs. 2,400 c. Perkins & Homer
Holland, 449 2,245 J. R. Francis & Co.

Ochre—
Italy, 11 cks. Wilkinson, Heywood, & Co.
France, 38 W. Harrison & Co.
" 30 E. Jones & Co.
" 70 C. F. Gerhardt
Spain, 37 Vokins & Co., Ld.
France, 22 pks. J. Flack
Holland, 18 Phillipps & Graves

Paraffin Scale—
U. States, 68 brls. Lon. & Til. Ltge. C. & D. Co.
" 100 cs. "
" 34 brls. Williams, Torrey, & Co.
" 5,728 Anglo-American Oil Co., Ld.

Pearl Ash—
Canada, 57 c. S. Ward & Co.
France, 110 F. W. Berk & Co.

Phosphate Rock—
France, 240 t. A. Hunter & Co.
Algeria, 1,500 Odams Manure & Chemical Co.

Pitch—
Germany, 277 cks. Fellows, Morton, & Co.
Holland, 20 Poth, Hille, & Co.
W. Indies, 26 Anglo-Contl. Guano Works
N. Russia, 1,300 Linck, Moeller, & Co.
Belgium, 17 Poth, Hille, & Co.

Platinum Ore—
Russia, 8 c. H. Grey, jnr.

Plumbago—
Ceylon, 51 brls. Lon. & Til. Ltge. C. & D. Co.
" 147 R. G. Hall & Co.
" 198 R. Waters
" 100 J. Thredder, Son, & Co.
" 35 H. Grey, jnr.
U. States, 5,600 bxs. Rosenberg, Loewe, & Co.
France, 12 cks. J. W. Cook & Co.
Italy, 200 bgs. Morgan Crucible Co.
" 100 Beck & Pollitzer

Potassium Carbonate—
Germany, 140 c. H. Lambert
" 190 Petri Brs.
France, 90 W. E. Cole

Potassium Cyanide—
France, 10 pks. Burnett Brs. & Sons

Potassium Muriate—
Germany, 508 bgs. Bessler, Waechter, & Co.

Potassium Permanganate—
Germany, 20 pks. R. W. Greeff & Co.
Holland, 20 kgs. "

Potassium Silicate—
Holland, 30 cks. J. Barber & Co.

Pyrites—
Portugal, 970 t. Mascn & Barry

Rosin—
U. States, 800 brls. Moore & Hole
" 500 F. & S. Chiesman & Co.

Saltpetre—
E. Indies, 125 bgs. A. B. Curtis & Co.
Germany, 4 cks. T. H. Lee

Soap—
France, £5 Ralli Brs.
" 4 John Cockerill Line
" 224 Lon. & Til. Ltge. C. & D. Co.
" 35 Mory & Co.
" 31 Vokins & Co.
" 60 Hunt & Kerr
" 65 J. & A. Ferguson
U. States, 500 Prop. Fenning's Wf.
Germany, 40 Phillipps & Graves
Holland, 58 "
Italy, 10 Bailey & Co
Germany, 12 H. Lambert
Holland, 14 J. Owen
Germany, 7 L. & I. D. Jt. Co.
" 2 Butler's Wf., Ld.
U. States, 240 Lunham & Moore

Soda Crystals—
Belgium, 120 c. H. Wallace & Co.
" 120 Leach & Co.

Sodium Acetate—
France, 22 pks. J. Harrison

Sodium Nitrate—
Chili, 14,294 bgs. W. Montgomery & Co.

Sodium Silicate—
Holland, 30 pks. J. Barber & Co.

Starch—
Belgium, 420 pks. T. H. Lee
" 736 cs. "
" 100 Hore & Scrivener
France, 650 pks W. E. Cole
Germany, 320 Seaward Brs., Ld.
" 54 Phillipps & Graves
U. States, 1,050 R. G. Hall & Co.
" 950 Beck & Pollitzer
Germany, 6 Butler's Wf., Ld.
Holland, 45 Phillipps & Graves
Belgium, 20 Leach & Co
" 40 Taylor Brs.
" 520 C. Tennant, Sons, & Co.
France, 630 E. & T. Pink
Canada, 47 R. G. Hall & Co.
Belgium, 424 T. Ronaldson & Co.
U. States, 250 R. Bennett & Co.
" 100 W. G. Taylor & Co., Ld.

Stearine—
Holland, 51 bls. J. Owen
France, 100 bgs. Bennett S. S. Co.
Belgium, 25 T. H. Lee
Holland, 18 cks Robinson, Roberts, & Co.

Sulphur—
Italy, 500 t. Fuerst Brs.
" 5 Bremer, Bennett, & Co.
" 500 G. Boor & Co.
" 200 Ekman Pulp & Paper Co.
" 23 Deering & Robottom
" 5 F. Smith
Spain, 300 J. Forster

Talc—
E. Indies, £95 A. E. Piggott

Tar—
N. Russia, 2,350 brls. W. F. Malcolm & Co.
" 4,046 Linck, Moeller, & Co.
Germany, 100 W. Beard & Son

Tar Oil—
N. Russia, 1 ck. A. & M. Zimmermann

Tartaric Acid—
Italy, 10 pks. B. & F. Wf. Co.

Turpentine—
Russia, 52 brls. H. Bertram & Co.
" 53 F. & S. Chiesman & Co.

Ultramarine—
Germany, 44 pks. Steinhoff, Sons, & Co.
Holland, £1 J. Owen

Varnish—
U. States 48 pks. Williams, Torrey, & Co.
" 15 Pinchin, Johnson, & Co.
Germany, 22 Butler's Wf., Ld.

Verdigris—
France, 2 cks. H. Lorenz

White Lead—
Germany, 6 pks. H. Lambert
Belgium, 30 brls. G. F. Banes
" 46 T. & W. Farmiloe, Ld.
Germany, 22 pks. H. B. Alder & Co
Belgium, 52 J. R. Francis & Co.
Germany, 62 D. Storer & Sons
Holland, 35 Burrell & Co.
Austria, 20 G. Rowney & Co.
Germany, 16 Phillipps & Graves

Wood Pulp—
Norway, 200 pks. Becker & Co.
" 600 Johnsen & Jorgensen
Holland, 741 C. S. Lovell
Sweden, 150 Henderson, Craig, & Co.
Norway, 1,280 W. D. Cork
Sweden, 64 Tough & Henderson
Canada, 200 Henderson, Craig, & Co
Portugal, 1,000 Page, Son, & East
Canada, 2,340 Furness, Withy, & Co.

Zinc Chloride—
Holland, 17 cks. J. Barber & Co.

Zinc Oxide—
Holland, 10 pks. M. Ashby, Ld.
U. States, 350 "
Belgium, 10 J. W. Cook & Co., Ld.
Germany, 60 R. W. Greeff & Co.
Holland, 50 Burrell & Co.

Zinc Sulphate—
Germany, 22 cks. F. Smith

LIVERPOOL.

Week ending August 18th.

Antimony Ore—
Mollendo, 61 sks. Kleinwort, Sons & Co.

Borate of Lime—
Mollendo, 3,375 sks.

Caoutchouc—
Mollendo, 7 bls. T. Adams & Co.

Colours—
Hamburg, 18 cs.
Rouen, 2 cks. Co-op. W'sale Society, Ld.

Cream of Tartar—
Barcelona, 5 bskts. J. H. Sitzler
Oporto, 5 cks.

Dyestuffs—
Algarrobilla
Huasco, 600 sks.
Argols
Oporto, 24 cks.
Cutch
Rangoon, 600 bxs.
Extracts
Norfolk, Va., 10 brls.
Bordeaux, 3 cks.
Fustic
Kingston, 942 tcs. Gillespie & Co.
Shumac
Barcelona, 200 cks.

Dyestuffs (*otherwise undescribed*)
Colombo, 4 bgs.
Mollendo, 195 bls. J. Schroeder & Co.

Flourine—
Norfolk, Va., 5,050 sks.

Glucose—
Cevie, 400 brls. L. Sutro & Co.
Boston, 400

Glue—
Hamburg, 40 bgs.

Manure—
Boston, 8 brls.

Paraffin Scale—
Cevie, 1,840 brls. Thompson & Bedford
Baltimore, 100

Paraffin Wax—
Rangoon, 80 pks.

Phosphates—
Ghent, 100 t.

Pyrites—
Huelva, 1,659 t. Matheson & Co.

Rosin—
Baltimore, 1,004 brls.

Salt—
Hamburg, 3 cks.

Soap—
Newport News, 309 brls.
Barcelona, 6 cs. W. I. Pac. S. Co.
Boston, 10 W. Faggitt
Teneriffe, 4 bxs.

Soapstone—
Bordeaux, 100 l gs. Geo. G. Blackwell, Sons & Co.

Sodium Nitrate—
Iquique, 9,058 sks.

Starch—
N'port News, 110 brls.
Baltimore, 200 bgs.

Stearine—
Hamburg, 80 cs.
Rouen, 26 bxs. Co-op. W'sale Society, Ld.

Talc—
Barcelona, 100 sks.

Tallow—
New York, 29 tcs. Colby & Co.
" 21 brls. J. W. de Silva & Co.
Boston, 50 cks. 217 brls. 702 tcs.
Montreal, 71 brls.
Newport News, 150 tcs

Tartar—
Bordeaux, 41 cks.
Tartaric Acid—
Bordeaux, 5 cks.
Wood Pulp—
Montreal, 2,792 bls A. Rice & Co.
Boston, 314 rolls.

MANCHESTER.

Week ending August 20th.

Acetate of Lime—
New York, 1,087 bgs.
Rouen, 154
Aniline Colours—
Rouen, 1 cs.
Barytes—
Antwerp, 170 bgs.
Cement—
Antwerp, 200 bgs
Ghent, 1,000 J. T. Fletcher & Co.
Chemicals *(otherwise undescribed)*
Rouen, 60 cks.
Colours—
Hamburg, 6 cks. 8 cs.
Dyestuffs *(otherwise undescribed)*
Antwerp, 100 bgs. J. T. Fletcher & Co.
Farina—
Hamburg, 20 bgs.
Gelatine—
Hamburg, 9 cs.
Rouen, 25
Glue—
Hamburg 3 cks.
Rouen, 70 27 cs.
Treport, 20 bls.
Lead Acetate—
Hamburg, 20 cks.
Limestone—
Antwerp, 6 pks. J. T. Fletcher & Co.
Ghent, 5 cs. ,,
Manganese Borate—
Hamburg, 1 ck.
Ochre—
Rouen, 13 cks.
Treport, 39
Paraffin Scale—
New York, 911 brls.
Po ass'um Chlorate—
Gothenburg, 40 kgs.
Rosin—
New York, 500 brls.
Sodium Acetate—
Rouen, 11 cks.
Sodium Chlorate—
Gothenburg, 4 cks.
Sod.um Phosphate—
Antwerp, 13 cks.
Sodium Prussiate—
New York, 14 cks.
Starch—
Antwerp, 120 cs.
Montreal, 625 bgs.
New York, 200
Wood Pulp—
Gefle, 6,458 bls. J. & P. Hutchison
Gothenburg, 1,095
Hamburg, 60
Montreal, 3,000 bdls.
New York, 405 20 cs.
Stromfors, 1,200 bls.
Zinc Oxide—
Hamburg, 25 cks.
New York, 100 brls.

HULL.

Week ending August 20th.

Alumina Sulphate—
Rotterdam, 84 bgs Hull & Netherlands S. S. Co.
Barytes—
Antwerp, 20 bgs. Bailey & Le tham, Ld
,, 167 pks. H. F. Pudsey
Bremen, 51 cks.
Rotterdam, 23 Hull & Netherlands S. S. Co.
Bone Meal—
Karachi, 1,500 bgs.
Rotterdam, 761 T. F. Laraid
Chemicals *(otherwise undescribed)*
Antwerp, 7 pks. Wilson, Sons, & Co., Ld.
Dunkirk, 50 ,,
Danzig, 14 cks.
Hamburg, 2 ,,
Colours—
Amsterdam, 15 cks. Hull & Netherlands S. S. Co.
Antwerp, 1 cs. Bailey & Leetham. Ld.
,, 24 pks. 10 brls. Wilson, Sons. & Co., Ld.
Bremen, 2 cs. J. Pyefinch & Co.
Hamburg, 5 cks.
Rotterdam, 24 pks. 8 cks. 11 cs. Hull & Netherlands S. S. Co.
St. Petersburg, 10 pks.
Cream of Tartar—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Cryolite—
Copenhagen, 15 cks. Wilson, Sons, & Co., Ld.
Farina—
Stettin, 100 bgs.
Glucose—
Rotterdam, 80 bgs. Hull & Netherlands S. S. Co
Glue—
Antwerp, 40 bls. Bailey & Leetham Ld.
Dunkirk, 17 cks. Wilson Sons, & Co., Ld.
Glycerine—
Hamburg, 40 pks. Wilson, Sons, & Co., Ld.
Indigo—
Rotterdam, 5 brls. Hull & Netherlands S. S. Co.
Ochre—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.
Paraffin Wax—
New York, 575 brls.
Phosphates—
Ghent, 162 t.
Pitch—
Copenhagen, 100 brls. Wilson, Sons, & Co., Ld.
Pyrites—
Huelva, 1,432 t.
Saltpetre—
Hamburg, 20 kgs. Wilson, Sons, & Co., Ld.
Soap—
Rotterdam, 20 cs. Hull & Netherlands S. S. Co.
Soda—
Amsterdam, 135 bgs. Hull & Netherlands S. S. Co
Ghent, 200 Wilson, Sons. & Co., Ld.
Hamburg, 3 cks. Bailey & Leetham, Ld.
Starch—
Antwerp, 220 cs. Wilson, Sons, & Co., Ld
Bremen, 2,462 Veltmann & Co.
Rotterdam, 70 Hull & Netherlands S. S. Co.
Stearine—
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
Tallow—
Dunkirk, 211 cks. Wilson, Sons, & Co., Ld.
Tar—
Stockholm, 10 brls. Wilson, Sons, & Co., Ld.
Tartar—
Bordeaux, 7 cks
Tartaric Acid—
Rotterdam, 8 cks. Hull & Netherlands S. S. Co.
Ultramarine—
Bremen, 18 cks.
Rotterdam, 4 Hull & Netherlands S. S Co.
White Lead—
Amsterdam, 12 cks. Hull & Netherlands S S. Co.
Antwerp 54 Bailey & Leetham, Ld.
Rotterdam, 121 Hull & Netherlands S S. Co.
Wood Pulp—
Antwerp, 25 bls. Bailey & Leetham, Ld.
Bergen, 170 pks. Wilson, Sons, & Co., Ld.
Christiania, 1,525 bls. ,,
Drontheim, 280 ,,
Gothenburg, 203 pks. ,,
,, 53 bls. W. Shipstone & Co.
Hamburg, 200 pks. Wilson, Sons, & Co., Ld.
Stettin, 200
Stockholm, 50 bls. ,,
Zinc Ashes—
Antwerp, 10 cks Bailey & Leetham, Ld.
Zinc Oxide—
New York, 50 brls.

GLASGOW.

Week ending August 25th.

Alumina Sulphate—
Rotterdam, 150 bgs. J. Rankine & Son
92 cks.
Aniline—
Rotterdam, 10 bxs. J. Rankine & Son
15 brls.
Barium Sulphate—
Antwerp, 81 cks.
Barytes—
Rotterdam, 55 cks. J. Rankine & Son
91 pks.
Chemicals *(otherwise undescribed)*
Hamburg, 13 cks.
Rotterdam, 1 ck. 1 cs. J. Rankine & Son
Colours—
Rotterdam, 8 cks. 2 cs. 9 bxs. 32 brls. 34 pks. J. Rankine & Son
Antwerp, 2 cks. 1 cs.
Hamburg, 4 J. Currie & Co.
Dyestuffs—
Aniline Colours
Amsterdam, 2 cs.
Hamburg, 1
Extracts
Fiume. 304 brls.
Dunkirk, qty.
Antwerp, 1 ck. 1 cs.
Indigo
Rotterdam, 1 brl. J. Rankine & Son
French Chalk—
Fiume, 50 bgs.
Glucose—
Boston, 249 brls.
New York, 90
Glue—
Antwerp, 2 cks.
Rouen, 51 10 bls.
Christiania, 100 bgs.
Rotterdam, 20 J. Rankine & Son
Guano—
Tromsoe, 1,150 bgs.
Infusorial Earth—
Hamburg, 240 bgs.
Phosphates—
Antwerp, 13 cks.
Potash—
Rotterdam, 102 cks. J. Rankine & Son
Soap—
Fiume, 57 cs.
Tonsberg, 2 pks.
Sodium Sulphate—
Antwerp 4 cks.
Rotterdam, 2 brls.
Rouen, 19 cks.
Starch—
Fiume, 50 bgs.
Boston, 150 bgs 100 sks.
Antwerp, 100 54 cs.
New York, 375 sks.
Hamburg, 140
Sulphur—
Catania, 50 bgs. Wm Bunten & Co.
20 brls.
,, 50 bgs. J. & A. Yuill
, 1,765 20 brls.
Sulphur Ore—
Seville, 1,660 t. Seville Sulphur & Copper Co.
Tallow—
New York, 100 tcs.
Tannin—
Hamburg, 2 cks.
Tartar—
Bordeaux, 26 cks.
Ultramarine—
Rotterdam, 30cs. J. Rankine & Son
Waste Salt—
Hamburg, 200 bgs.
,, 260 cks. & qty. J. Curtis & Co.
White Lead—
Rotterdam, 10 cks. J. Rankine & Son
Wood Pulp—
Oporto, 250 bls.
Hamburg, 7,000
Christiania, 1,550
Arendal, 125
Zinc Oxide—
Antwerp, 8 cks.
New York, 100 brls.

TYNE.

Week ending August 20th.

Asbestos—
Hamburg, 108 bgs. Tyne S. S. Co
Calcium Sulphate—
Gothenburg, 40 bgs.
Colours—
Antwerp, 1 ck. Tyne S. S. Co.
Glucose—
New York, 100 brls. Furness, Withy, & Co.
Ochre—
Rouen, 212 cks. J. Brown & Co
Paraffin Scale—
New York, 199 brls. C. Hassel & Son
150 cs.
Saltpetre—
Hamburg, 5 cks. Tyne S. S. Co.
Soap—
Rotterdam, 5 cs. Tyne S. S. Co.
Starch—
Antwerp, 140 cs. Tyne S. S. Co.
Rotterdam, 44 ,,
Ultramarine—
Rotterdam, 1 ck. Tyne S. S. Co.
Wood Pulp—
Christiania, 449 bls.
Drontheim, 10 bdls. P. H. Matthiessen & Co.
Zinc Oxide—
Antwerp, 15 brls. Tyne S. S. Co.

GOOLE.

Week ending August 17th.

Alizarine—
Rotterdam, 89 cks. 9 cs.
Alkali—
Calais, 4 cks.
Aniline—
Amsterdam, 9 cks. 1 cs.
Rotterdam, 201 41
Antimony—
Boulogne, 1 ck.
Barytes—
Rotterdam, 12 cs.
Caoutchouc—
Boulogne, 6 cks.
Colours—
Hamburg, 20 cks. 2 cs.
Dyestuffs *(otherwise undescribed)*
Boulogne, 44 cks, 3 cs. 188 pks.
Rotterdam, 50 11
Farina—
Amsterdam, 150 bgs.
Delfszyhl, 100
Glucose—
Calais, 100 bgs.
Indigo—
Rotterdam, 13 cks.
Logwood—
Belize, 335 t.
Mexico, 528
Manure—
Calais, 2,538 bgs.
Ochre—
Calais, 36 cks.
Phosphates—
Dunkirk, 800 bgs.
Potash—
Calais, 8 tns.

Pyrites—
Huelva, 500 t.
Seville, 950
Saltpetre—
Hamburg, 10 cks.
Rotterdam, 100 bgs.
Starch—
Ghent, 95 bxs.
Waste Salt—
Hamburg, 170 t.

Wood Pulp—
Rotterdam, 53 bls.

GRIMSBY.

Week ending August 20th.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 1
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Antwerp, 27 cs.
Colours—
Antwerp, 8 cks. 64 pks.
Hamburg, 14 2 cs. 21
Rotterdam, 4 4
Dyestuffs *(otherwise undescribed)*
Dieppe, 26 cks.

Glue—
Hamburg, 10 cks.
Silica—
Dieppe, 280 sks.
Soda—
Antwerp, 7 dms.
Starch—
Antwerp, 100 cs.
Rotterdam, 50

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 24th.

Alkali—
Auckland, 4 t. £28
Ammonia—
Calcutta, 4 cs. £12
Bombay, 5 15
Hankow, 42 50
Durban, 6 18
Pt. Elizabeth, 10 15
Cologne, 43 dms. 320
Hamburg, 10 20
Ammonium Carbonate—
B. Ayres, 1 t. £27
Stettin, 1 6 c. 28
Singapore, 5 14
New York, 10 kgs. 14
Ammonium Chloride—
Constantinople, 1 t. £33
Varna, 18 c. 26
Trebizonde, 1 12 53
Ammonium Sulphate—
Bremen, 110 t. 8 c. £1,130
Marseilles, 40 360
Hamburg, 50 500
Havre, 25 225
Barbadoes, 25 238
Arsenic—
New York, 62 cks. £126
Bisulphite of Lime—
Calcutta, 4 t. 8 c. £64
Calcium Sulphate—
Montreal, 1 t. 5 c. £230
Carbonic Acid Gas—
Ghent, 14 dms. £40
Caustic Soda—
Launceston 4 c. £5
Fremantle, 13 10
Chemicals *(otherwise undescribed)*
Antwerp, 10 kgs. £62
E. London, 6 cs. 44
Montreal, 1 12 pks. 107
Auckland, 3 25 69
Rotterdam, 42 190
Dunkirk, 15 cks. 200
Hamburg, 2 23 275
Brussels, { 5 / 10 kgs. 91
Adelaide, 44 35
Durban, 27 12
Perth, 11 18
Gibratar, 14 20
Melbourne, { 200 / 14 cks. 1 cs. 502
Paris, 18 81
Sydney, 30 89
Madras, 2 17
Pt. Elizabeth, 3 11
Fremantle, 50 125
Citric Acid—
Delagoa Bay, 1 c. £7
Durban, 4 25
Danzig, 1 ck. 33
Montreal, 2 12
St. Petersburg, 1 7
Auckland, 5 kgs. 3 49
Wellington, 5 31
Libau, 1 7
Bombay, 8 27
Amsterdam, 5 33
Sydney, 1 t. 113
Perth, 2 15
Coal Products—
Alizarine
Boston, 2 cks. £30
Aniline
Calcutta, 1 cs. £18
Melbourne, 1 6
Sydney, 2 19
New York, 137 drs 1,040
Anthracene
Cologne, 360 cks. £701
Carbolic Acid
Philadelphia, 5 cs. £91
Hamburg, 41 cks. 340
New York, 40 316
Fremantle, 25 dms. 8
Pt. Elizabeth, 50 43
Creosote
Dieppe, 23,500 galls £123
Brest, 710 brls. 442
Hong Kong, 1 cs. 6
St. Malo, 22,600 213
New York, 500 cks. 340
Naphtha
Melbourne, 100 dms. £48
Dunedin, 20 20
Naphthaline
Hamburg, 1 ck. £7
New York, 45 cks. 40
Antwerp, 1 9
Pt. Elizabeth, 20 9
Pitch
Antwerp, 1,038 t. £1,153
E. London, 5 cks. 6
Rotterdam, 188 brls. 450
Salonica, 100 45
Gibraltar, 6 6
Hong Hong, 1,588 690
Hamburg, 62 170
Bourgas, 40 11
Hochfeld, 250 t. 341
Helsingfors, 60 57
Wellington, 2 2 hf-brls.
Pyridine
Cologne, 15 brls. £165
Tar
Hamburg, 200 brls. £86
St. Petersburg, 900 585
Helsingfors, 565 31
Wellington, 20 dms. 4
Coal Products *(otherwise unues.)*—
Rotterdam, 12 cks. £70
Copper Sulphate—
Paris, 5 t. 16 c. £100
Colombo, 1 17
Cream of Tartar—
Fremantle, 3 c. £14
Wellington, 5 18
Auckland, 10 38
Cape Town, 2 11
Disinfectants—
Paris, 10 cks. £15
Adelaide, 6 cs. 10
Melbourne, 10 3 brls 61
Sydney, 1 54 pks 35
Wellington, 10 26
Bombay, 5 13
Antwerp, 10 cks. 50
Durban, 150 dms. 9 86
Singapore, 25 23
Glycerine—
Stockholm, 17 dms. £380
New York, 7 t. 3 c. 180
Manure—
Riga, 101 t. 4 c. £230
Treport, 21 80
Gothenburg, 59 2 200
Demerara, 40 320
New York, 1 9 37
Nitric Acid—
Channel Is., 21 carboys £42
Oxalic Acid—
Treport, 3 t. 13 c. £165
Oxygen—
Sydney, 1 cyndr. £33
Amsterdam, 1 cs. 55
Potash—
Sydney, 2 t. 3 c. £37
Brussels 8 70
Potash Salts—
Auckland, 12 t. 3 c £933
Potassium Bichromate—
Hamburg, 5 t. 19 c. £175
B. Ayres, 6 cks. 62
Potassium Chlorate—
Melbourne, 1 t. 8 c. £45
Potassium Cyanide—
Delagoa Bay, 230 cs. £2,003
New York, 1 t. 1 c. 110
Fremantle 17 12 1,883
Townsville, 8 840
Wellington, 3 cs. 10
Adelaide, 15 200
Melbourne, 7 13 c. 875
Singapore, 5 42
Pt. Elizabeth, 2 191
Durban, 2 214
Potassium Prussiate—
New York, 20 cks. £136
Saltpetre—
Auckland, 10 c. £12
Pt. Elizabeth, 10 10
Sheep Dip—
Durban, 2 c. £5
Beira, 3 6
E. London, 25 dms. 5
Melbourne, 1 t. 12 c. 25
Brisbane, 200 dms. 128
Soda—
Cape Town, 3 t. 5 c. £10
Pt. Elizabeth, 10 6
Paris, 5 8 100
Sodium Bicarbonate—
Singapore, 1 t. £7
Fremantle, 4 21
Sodium Carbonate—
E. London, 10 c. £16
Sodium Prussiate—
Antwerp, 10 t. £470
Boston, 17 cks. 180
Sodium Sulphate—
Ghent, 50 t. 10 c. £77
Sodium Tartrate—
Montreal, 12 c. £30
Sulphuric Acid—
E. London 1 t. 18 c. £17
Tartaric Acid—
Fremantle, 6 c. £35
Perth, 3 12
Melbourne, 10 56
Wellington, 2 11

LIVERPOOL.

Week ending August 24th.

Acetic Acid—
Copenhagen, 2 t. 11 c. £50
Lisbon, 6 brls. 6
Alum—
Guayquil, 1 t. £7
Pernambuco, 1 5
Symrna, 2 1 c. 3 q. 10
Trebizonde, 18 4 1 83
Melbourne, 1 10 8
Ammonium Carbonate—
Marseilles, 10 c. £20
Rotterdam, 1 t. 2 37
Copenhagen, 1 10 28
Hamburg, 19 31
Ammonium Chloride—
Genoa, 9 cks. £50
Bilbao, 2 t. 2 c 2 q 36
Montreal, 2 34
Philadelphia, 19 7 2 339
M. Video. 4
Copenhagen, 7 5
Ammonium Sulphate—
Nantes, 15 t. £135
Genoa, 124 10 c. 3 q. 1,107
Demerara 141 12 1,409
Las Palmas, 30 10 243 bgs. 573
Leghorn, 13 11 2 q. 136
Venice, 33 3 331
Cartagena 5 2 51
Houfleur, 50 3 1 450
Gd. Canary, 12 10 120
Valencia, 51 15 518
Bleaching Powder—
Antwerp 12 cks.
Baltimore, 61
Barcelona, 10
Bombay, 30 cs.
Boston, 479
Calcutta, 123
Catania, 25
Dunkirk, 17
Genoa 65
Ilyy-sud, 13
Lisbon, 87
Messina, 10
Milwaukee, 87
M. Video, 40
Nassau, 17
Newport News 78
New York, 187 dms.
Oporto, 25 cks.
Philadelphia, 204
Piræus, 3
Rouen, 1
San Sebastion, 17
Seville, 183 20 brls.
Vera Cruz, 24 20
Boracic Acid—
Rotterdam, 1 t 3 c. 1 q. £40
Borax—
Stamboul, 10 c. £9
Antwerp, 26 t. 8 354
Montreal, 10 1 2 q. 151
Natal, 1 14
Guayaquil, 1 2 22
Melbourne, 3 10 48
Brisbane, 1 10 21
Rotterdam 5 12 3 74
B Ayres, 1 14
Kurdji, 3 1 40
Christiania, 1 14
Toronto, 12 10 174
Hamilton, 15 218
Vera Cruz, 2 2 28
Adelaide, 10 7
Stockholm, 5 16 2 74
Calcium Chloride—
Brisbane, 5 t. 2 c. £12
Rangoon, 2 2 5
Melbourne, 9 19 21
New York, 50 5 94
Sydney, 10 2 22
Carbolic Acid—
B. Ayres, 10 c. £32
Los Angelos, 1 t. 79
Odessa, 6 2 q. 24
Rouen, 17 6 1,269
Colon, 1 cs. 5
Montreal, 5 c. 8
Caustic Soda—
Acapulco, 300 dms.
Alexandria, 144
Alicante. 10
Amsterdam, 67
Ancona, 17
Bahia, 130
Barcelona, 650 93 pks.
Bari, 18
Bilbao, 66
Bordeaux, 35
Boston, 50 brls.
B. Ayres, 60
Calcutta, 127
Cartagena (Sp.), 32 pks.
Cartagena, 20
Cavalla, 9
Ceara, 20
Copenhagen, 15
Corinto, 5
Delagoa Bay, 50 bxs.
Drammen, 5 brls.
E. London, 34 cs.
Galata, 50
Galatz, 457
Genoa 144
Gothenburg, 20
Gutujewski, 380
Halifax, 55
Hamburg, 18

Hiogo, 714
Ibrail, 200
Karachi, 10
La Guayra, 10
La Velade Coro, 15
Leghorn, 100
Lisbon, 30
Madras, 4
Malaga, 32
Manaos, 90
Malmo, 15
Melbourne, 84
Mexico City, 350
Mollendo, 20
Montreal, 60 pks.
Nassau, 47
Naples, 27
Newcastle, 56
New Orleans, 11 cs.
New York, 200
Oporto, 130
Padang 150
Para, 55
Pernambuco, 30
Philadelphia, 50
Piræus, 30
Port au Prince, 50
Pt. Natal, 21
Riga, 35
Rio G. do. Sul 80
Rouen, 15
Rotterdam, 45 pks.
St. Stephens, 50
Samarang, 11
Santos, 20
Seville, 380
Singapore, 40
Sourabaya, 10
Stettin, 70
Syra, 20
Tampico, 617
Tarragona, 50 30
Toronto, 100
Valencia, 80 25 brls.
Valparaiso, 150
Venice. 50
Vera Cruz, 338
Vigo, 15

Chemicals *(otherwise undescribed)*
Melbourne, 1 t. £27

China Clay—
Boston, 1,564 cks.
Calcutta, 148
Madras, 80
M. Video, 170
Newport News, 200
Odessa, 198 bgs.
Philadelphia, 300 cks.
Vera Cruz, 50

Citric Acid—
Singapore, 1 c. 3 q. £8

Coal Products—
Aniline
Piræus, 1 dm.
Aniline Oil
Barcelona, 24 cks.
Aniline Salts
Bombay, 2 cks.
Boston, 46 cs.
Smyrna, 7 brls.
Pitch
Corral, 20 brls.
Ibrail, 25
Kustendjie, 30
Tar
Para, 10 brls.

Copperas —
Calcutta, 200 brls. £55
Bourgas, 5 t. 6 c. 10

Copper Sulphate—
Havre, 5 t. 3 c. £84
Calcutta, 5 81
Konigsberg, 8 2 3 q. 133
Danzig, 1 4 20
Stettin, 1 4 20
Bourgas, 2 1 33
Libau, 1 4 1 19
Singapore, 1 16 16
Rouen, 4 17 75

Disinfectants—
Calcutta, 4 cs. £15
Madras, 25 dms. 12

Dyestuffs—
Aniline Colours
Fiume, 1 brl.
Philadelphia, 3 kgs.
Extracts
New York, 5 cks.
Logwood
Lisbon, 1 cs.

Fluoric Acid—
Demerara, 3 c. 2 q. £7

Glycerine—
Yokohama, 1 t. £54
Shanghai, 5 cs. 20

Magnesium Carbonate—
Tampico, 14 cs.

Magnesium Chloride—
Bordeaux, 5 c. £4

Magnesium Sulphate—
Alexandria, 40 cks.
Bombay, 40 bgs.
Lisbon, 54 43
M. Video, 35 brls.

Manure—
Gd. Canary, 30 t. £229
Las Palmas, 1 7
Nantes, 168 12 c. 352
Honfleur, 100 12 238
Genoa, 132 11 2 q, 516
La Pallice, 439 17 1,605

Oxalic Acid—
Barcelona, 7 t. 14 c. £210
Boston, 6 17 189

Paint—
Antwerp, 1 brl. 6 kgs.
Bilbao, 34 dms.
Bombay, 25
Cadiz, 2
Cape Coast, 50
Cartegena (Sp.), 40
Egwanga, 20
Ferrol, 35
Genoa, 4 cks.
Guayaquil, 8 cs.
Hong Kong, 30 1 ck.
Lagos, 35 pks.
Larnaca, 2 cks.
Lisbon, 10
Manoas, 2
Melbourne, 32
Monterey, 8 cs.
Rio G. do Sul, 20
St. Thomas, 104 kgs.
Santos, 25
Sierra Leone, 2 cks.
Valparaiso, 10

Painters' Colours—
Brunswick, { 2 cks. 14 brls. / 11 kgs.
Hong Kong, 10 cs.
M. Video, 5
New York, 12 cks. 5
Moro Redondo, 2
Para, 2
Philadelphia 200
Punta Arenas, 6
Puerto Plata, 5 brls.
Rio de Janeiro, 182 dms.
St. Petersburg, 12 cks.
St. Thome, 4
Santos, 1 cs.

Paraffin Wax—
Genoa, 50 bgs.

Phosphorus—
Hiogo, 3 t. 15 c. £686
Osaka, 10 80
Yokohama, 1 210

Potassium Bichromate—
Constantinople, 8 c. 1 q. £14
Rio de Janeiro, 13 27

Potassium Chlorate—
Amsterdam, 10 c. £16
Bari, 1 t. 1 31
Gothenburg, 11 360
Libau, 2 10 70
Mexico City, 1 30
New York, 15 436
Philadelphia, 5 150
Stockholm, 3 96
Sydney, 5 133
Tampico, 1 30
Vera Cruz, 10 13

Potassium Cyanide—
Rio de Janeiro, 3 t. 4 c. 1 q. £280

Potassium Prussiate—
Constantinople, 4 c. 1 q. £13
Genoa, 14 cks. 197

Salt—
Abonnema, 10 t.
Antwerp, 135
Baltimore, 65
Bakana, 40
Beira, 50 cs.
Boston, 664 12 c.
Brass, 15
Brussels, 200
Brisbane, 263 9
B. Ayres, 57 13
Calcutta, 4,297 6
Chicago, 200
Halifax, 25
Hamburg, 94
Iceland, 175
Jamaica, 242
Lagos, 137
Melbourne, 206 6 100
Mossel Bay, 80
Newcastle, 15
Montreal. 456 6
Old Calabar, 100 bgs. 2,500 sks.
Para, 1,600 21,020
Pt. Natal, 1,660
Quebec, 15,000
Reykjavik, 51 t.
Rio G. do Sul, 50 cs.
Rosario, 100 brls.
Santa Catharina, 25
Sierra Leone, 2,000 bgs. 2,000 sks.
Sydney, 50 t. 880
Talcahuano, 150 cs.
Wiborg, 600 t.

Salt Cake—
Antwerp, 160 t. £193
Genoa, 5 8 c. 10

Saltpetre—
Para, 2 t. £41

Sheep Dip—
B. Ayres, 28 t. 9 c. 2 q. £685

Soap—
Accra, 100 bxs.
Alexandria, 130 110 cs.
Algoa Bay, 106 25
Antwerp, 100 6
Axim, 200
Basle, 128
Barbadoes, 1,001
Bombay, 51 30
Boston, 5 brls. 6 cks.
Brussels, 260 cs.
B. Ayres, 24
Calcutta, 109
Canaria, 208
Christiania, 20
Colombo, 10
Constantinople, 5
Copenhagen, 40
Delagoa Bay, 145 6 bdls.
Demerara, 1,100
Dominica, 40
E. London, 20 28
Gibraltar, 26 50
Guayaquil, 200
Hobart, 5 tnks.
Hobson's Bay, 31
Hong Kong, 125
Johannesburg, 6 15
Karachi, 300 35
Kimberley, 10
Lagos, 200
Las Palmas, 166
Launceston, 320
Madras, 26
Malta, 178
Manaos, 430
M. Video, 4
Muscat, 5
Newcastle, 2
New York, 44
Para, 900
Penang, 75
Piræus, 20
Pt. Elizabeth, 40
Pt. Natal, 125
Pretoria, 150
Rangoon, 35
Rawal Pindi, 12
Rotterdam, 235
St. John's, 280
St. Thomas, 550
Salonica, 1
Shanghai, 2,392
Sierra Leone, 100
Singapore, 62
Sydney, 5,000 16
Tientsin, 92
Trinidad, 750 2 bdls.
Valparaiso, 1
Wellington, 4 crts. 1 tnk.
Zurich, 260

Soap Lye—
Hamburg, 40 dms.

Soda—
Kingston, 16 cks.
Madras, 10 bxs.
Toronto, 1

Soda Ash—
Antwerp, 23 cks.
Baltimore, 34
Barcelona, 20
Bari, 70 bgs.
Boston, { 32 tcs. / 480 156
Brantford, 72
Brisbane, 33
B. Ayres, 322
Calcutta, 161
Callao, 30
Ceara, 15 brls.
Chrisbeansana, 2
Copenhagen, 180
Corfu, 30
Genoa, 500
Hamburg, 4
Hiogo, 600 kgs. 195
Johannesburg, 26
Melbourne, 107
Naples, 350 bgs.
Kobe, 124
New York, 32 tcs. 70
Odense, 50
Oporto, 16
Philadelphia, 560 57
Riga, 16
Rio de Janeiro, 125 brls. 115
Rio G. do Sul, 190
San Francisco, 128
Seville, 30
Skein, 50
Smyrna, { 50 kgs. / 100 bgs.
Stettin, 1,095
Sourabaya, 3
Syra, 30 55
Toronto, 14
Trieste, 100
Venice, 1,000
Vera Cruz, 38

Soda Crystals—
Alexandria, 105 brls.
Boston, 140
B. Ayres, 100 kgs.
Calcutta, 7
Delagoa Bay, 40 pks.
Demerara, 26 cks.
Gibraltar, 50
Lisbon, 28
Malta, 50
M. Video, 456 32
Philadelphia, 140
St. John's, 88 25
Shanghai, 10
Sydney, 156

Sodium Acetate—
Vera Cruz, 2 cks.

Sodium Arseniate—
Boston, 6 cks.

Sodium Bicarbonate—
Antwerp, 10 bgs.
Batavia, 10 kgs.
Brisbane, 240 10
Calcutta, 725 129 pks.
Christiania, 20
Copenhagen, 10
Delagoa Bay, 10
Demerara, 20
Genoa, 24 cks.
Gibraltar, 8
Guatemala, 25
Hamilton, 200
Havana, 10
Hiogo, 600
Kingston, 34 pks.
Malta, 48
Massawa, 7
Melbourne, 200
M. Video, 210
Nassau, 60
N. Orleans, 75 brls.
New York, 100 cks.
Odessa, 221 4
Paris, 85
Penang, 4
Rangoon, 5 bgs.
Rotterdam, 12 pks.
St. John's, 60 kgs.
Salonica, 15
Soa Paulo, 250
Smyrna, 32
Sourabaya, 30
Valparaiso, 50
Varna, 20
Venice, 240
Vera Cruz, 5
Yokohama, 750

Sodium Carbonate—
Boston, 56 brls.

Sodium Chlorate—
Gutujewski, 100 kgs.
New York, 40 1 ck.
Rouen, 20

Sodium Sulphate—
Lisbon, 3 cks.

Starch—
Oporto, 20 bgs.
Santos, 6 cks.

Sulphur—
Bahia, 4 t. 1 c.
Gothenburg, 75
Lagos, 6
Natal, 6
Pernambuco, 1 8 2 q.
Santos, 1 19 2

Sulphuric Acid—
Havana, 4 t.

rphosphates—
a, 24 t. 12 c. 2 q. £45
fleur, 336 3 2 617
allice, 764 14 1 1,238
Palmas, 30 146
le, 73 16 204
hama, 10 30
aric Acid—
toon, 1 ck. £7
Crystals—
an, 8 c. £17
ash—
erp, 14 cks.
anga, 6 dms.
raquil, 2 cs.
orn, 4
to, 3
ambuco, 1
le, 1
e Lead—
itta, 88 kgs.
a Leone, 16 c.
kn, 40
Chloride—
bay, 5 t. 7 c. 2 q. £69

MANCHESTER.

Week ending August 24th.

onium Chloride—
lad, 5 brls.
alic Acid—
many, 100 cks.
nicals *(otherwise undescribed)*
burg, 10 cks. 2 cs.
Products—
niline Oil
ce, 5 dms.
ophthylamine
many, 62 cks.
ich
erp, 240 t.
r
out, 10 brls.
r Salts
ig, 108 bgs.
eras—
ndria, 105 brls.
ad, 67
acts—
ce, 11 cks. 1 cs.
—
many, 10 cks.
and, 16
—
out, 11 kgs.
ers' Colours—
bay, 2 kgs.
—
ce, 1 t.
and, 200
hn's, N.B., 397
—
ce, 3 cks.
—
s, 1 cs.
Crystals—
s, 2 cks.
m Naphthionate—
many, 30 cks.
m Bicarbonate—
ndria, 40 kgs.
out, 10
, 40
w—
many, 26 cks.
Chloride—
bay, 10 cks.
ce, 8

HULL.

Week ending August 20th.

—
erp, 16 cks.
onium Sulphate—
dirk, 235 bgs.
n, 500
Slag—
tiania, 549 t.
hing Powder—
ig, 58 cks.
n, 39
nicals *(otherwise undescribed)*
9 cks.
erdam, 16
Antwerp, 2 cs.
Christiania, 1,329 slbs.
Copenhagen, 16
Danzig, 3 90 pks.
Gothenburg, { 50 t. / 5 cks. 6
Hamburg, 11
New York, 13
Riga, 25 12
Rotterdam, 40
St. Petersburg, 16
Stettin, { 4 / 100 bgs. 5
Cottonseed Oil—
Amsterdam, 136 c.
Antwerp, 1,094
Copenhagen, 51
Dunkirk, 252
Ghent, 103
Gothenburg, 200
Hamburg, 529
Rotterdam, 424
Stettin, 60
Stockholm, 18
Dyestuffs *(otherwise undes.)—*
Christiania, 6 cks.
Rotterdam, 3
Glue—
New York, 85 cks.
Linseed Oil—
Christiania, 358 c.
Christiansand, 35
Drontheim, 189
Hamburg, 21
Manure—
Dunkirk, 3,877 bgs.
Painters' Colours—
Abo, 10 cks.
Antwerp, 84 1 cs. 6 dms.
Bergen, 20
Christiansand, 8
Copenhagen, 41 3 2 pks.
Danzig, 9
Drontheim, 5
Hamburg, 5 4
Konigsberg, 53
New York, 16
Rotterdam, 12 18 dms.
Rouen, 4
Stettin, 14 1
Stockholm, 2
Pitch—
Antwerp, 60 t.
Slag Meal—
Gothenburg, 1,016 bgs.
Soap—
Aalesund, 1 cs.
Copenhagen, 1 ble.
Gothenburg, 1
Hamburg, 1
Rotterdam, 40
Tallow—
Hamburg, 37 cks.
Stockholm, 20
Tar—
Amsterdam, 6 brls.
Antwerp, 6 cks.
Bremen, 1
Danzig, 3
Konigsberg, 2
Stettin, 10
Turpentine—
Bergen, 4 cs.
Gothenburg, 5 brls.
Stavanger, 2 cks.
Varnish—
Antwerp, 2 cs.
Copenhagen, 2 cans
Danzig, 2
Stettin, 6 cks.

GLASGOW.

Week ending August 25th.

Ammonium Carbonate—
Feviz, £45
Ammonium Chloride—
Italy, £57
Ammonium Sulphate—
Amsterdam, 102 t. 9 c.
" £4,351
Rouen, 83 8¾
Asbestos—
Hiogo, £28 16s.
Bleaching Powder—
Melbourne, 10 t. 16¼ c.
Boracic Acid—
Melbourne, 2 t. 5½ c.
Yokohama, £25 15s.
Castor Oil—
Adelaide, £20
Chemicals *(otherwise undescribed)*
Christiania, £31
Melbourne, 35
Rotterdam, 20
Coal Products—
Naphtha
Nickerie, 1 t. 2 c.
Paris, £90
Pitch
Hamburg, 13 t. 12 c.
Tar
Canada, £110
Christiania, 5
Dried Blood—
Nantes, 10 t.
Dyestuffs *(otherwise undescribed)*
Calcutta, £26
Rotterdam, £7 10s.
Extracts—
Cornwall, £33
Melbourne, 48
Montreal, 74
Farina—
Rio de Janeiro, £24
Iodine—
Rotterdam, £840
Linseed Oil—
Canada, 4 t. 4¾ c.
Melbourne, 1 ¾
Litharge—
Montreal, £191
Logwood—
Montreal, £28 19s.
Magnesium Sulphate—
Adelaide, £30
Manganese (Recovered)—
Fiume, £105
Paint—
Cheefoo, £30 10s.
Hong Kong, £80
Painters' Colours—
Calcutta, £76
Colombo, 98
Transvaal, £25 18s.
Paraffin Wax—
Fiume, £969
Italy, 98
Sicily, 25
Trieste, 389
Potassium Bichromate—
Amsterdam, £75
Antwerp, 329
Paris, 182
Rotterdam, 236
Rouen, 245
Soap—
Singapore, 6 t. 5 c.
Soda—
Nickerie, 12 c.
Sodium Bichromate—
Italy, 4 t. 1 c.
Rouen, 14 11¾
Starch—
Rio de Janeiro, £50
Sulphuric Acid—
Nickerie, 1 t. 10 c.
Tallow—
Rotterdam, 11 t. 5 c.

TYNE.

Week ending August 20th.

Alkali—
Christiania, 1 t. 1 c.
Reval, 2 17
St. Petersburg, 20
Alum—
Rotterdam, 15 t. 7 c.
Alum Waste—
Aarhuus, 20 t. 2 c.
Antimony—
Hamburg, 2 t.
St. Petersburg, 5
Barium Binoxide—
Amsterdam, 9 t. 7 c.
Barium Carbonate—
Hamburg, 150 t.
St. Petersburg, 75 10 c.
Bleaching Powder—
Aarhuus, 32 t. 18 c.
Amsterdam, 1 19
Antwerp, 11 6
Bergen, 5 1
Christiania, 21 16
Copenhagen, 21 15
Hamburg, 1 16
Odense, 10 4
Reval, 27 15
Rotterdam, 17 8
Trondhjem, 10
Caustic Soda—
Amsterdam, 4 t. 10 c.
Christiania, 5 16
Copenhagen, 1 10
Hamburg, 150 12
Reval, 67 19
Stavanger, 1 3
Litharge—
Antwerp, 2 t. 15 c.
Christiania, 11
Hamburg, 1 5
Magnesia—
Antwerp, 3 q.
Hamburg, 1 t. 1 c.
Lisbon, 1 9
Rotterdam, 9
Magnesium Carbonate—
Lisbon, 6 c.
Magnesium Oxide—
Christiania, 1 c.
Paint—
Antwerp, 3 t. 4 c.
Hamburg, 2 5
Painters' Colours—
Hamburg, 4 t. 1 c.
Salt—
Reval, 50 t.
Soda—
Amsterdam, 40 t.
Christiania, 37 16 c.
Rotterdam, 42 15
Svendborg, 1 12
Soda Ash—
Antwerp, 1 t. 7 c.
Soda Crystals—
St. Petersburg, 10 t.
Sodium Sulphate—
Gothenburg, 275 t.
Reval, 20 8 c.
Sulphur—
Christiania, 450 t.
White Lead—
Christiania, 2 c.
Copenhagen, 4 t. 14
Zinc Oxide—
Christiania, 1 c.

GOOLE.

Week ending August 17th.

Caoutchouc—
Boulogne, 6 cks.
Chemicals *(otherwise undescribed)*
Amsterdam, 22 cks.
Coal Products *(otherwise undes.)—*
Antwerp, 30 cks. 1 cs.
Boulogne, 15
Ghent, 2 1 10 dms.
Hamburg, 1
Rotterdam, 7 1
Dyestuffs *(otherwise undescribed)*
Ghent, 15 cks.
Hamburg, 14
Logwood—
Hamburg, 32 t.
Manure—
Dunkirk, 100 bgs.
Painters' Colours—
Rotterdam, 3 cks.

GRIMSBY.

Week ending August 20th.

Alkali—
Hamburg, 6 cs.
Chemicals *(otherwise undescribed)*
Dieppe, { 11 cks. / 1 kg. 10 cs.
Coal Products *(otherwise undes.)—*
Dieppe, 89 cks. 2 cs. 30 brls.
Hamburg, { 1 4 pks. / 6 btls.
Dyestuffs *(otherwise undescribed)*
Malmo, 1 cs.
Manure—
Esbjerg, 2,040 bgs.
Hamburg, 267
Painters' Colours—
Antwerp, 1 kg. 2 cs. 4 pks.
Hamburg, 2 cks. 3 59
Malmo, 10
Rotterdam, 1 2

PRICES CURRENT. WEDNESDAY, August 31st, 1898

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids :—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	5	9	& 8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	15	0	0
Alum (loose lump) .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B. .. .. ,,	0	0	2½
,, =24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	3
,, Sulphate (grey) London .. .. .. per ton	10	5	0
,, ,, (grey) Hull .. .. ,,	10	0	0
Aniline Oil (pure) .. .. per lb.	0	0	5½
Aniline Salt ,, ... ,,	0	0	4¾
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9½
,, 50/90 ,, ... ,,	0	0	9½
Carbolic Acid (crude 60°) .. .. per gallon	0	1	11
,, (crystallised 40°) .. .. .. per lb.	0	0	7
,, (liquid 95/97% .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. ,,	1	0	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	51	15	0
,, Sulphate .. .. ,,	16	10	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80 % .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	2	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	16	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, Nitrate	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	-
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P .. .. .. ,,	0	4	0
Oils :—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	0	0
Stearine .. .. per ton	25	0	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	5	0
,, Chlorate .. .. per lb.	0	0	3⅜
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	22	15	0
,, ,, (Caustic Potash) 75/80 % .. ,,	18	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton (10 ton lots)	8	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	15	0
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7		6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6		6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	
,, Bicarbonate .. .. ,,	6	10	
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25% .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	
,, Nitrite, 98 % .. .. per ton	25		0
,, Phosphate .. .. ,,	9	15	5
,, Prussiate .. .. per lb.	0	0	
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	7
,, Stannate, 40 % .. .. per cwt.	2	15	
,, Sulphate (Salt-cake) .. .. per ton.	1	5	
,, ,, (Glauber's Salts) .. .. ,,		7	
,, Sulphide .. .. ,,	7	5	
,, Sulphite .. .. ,,	4	15	
Strontium Hydrate, 100% .. .. ,,	10	15	
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		0
,, Barium, 95 % .. .. ,,	0		0
,, Potassium .. .. ,,	0		0
Sulphur (Flowers) .. .. per ton.	7	7	
(Roll Brimstone) .. .. ,,	6	3	
,, Brimstone : Best Quality .. .. .. ,,	4	12	
Superphosphate of Lime (26%) .. .. ,,	2	10	
Tallow .. .. ,,	22		
Tin Crystals .. .. per lb.	0		
,, English Ingots .. .. per ton	75		
Zinc (Spelter) .. .. ,,	20	17	
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6		
,, Sulphate, Crystal .. .. ,,	6	7	

THE

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AND

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THE NEW DENMARK.

THE race of Hamlets will always live in the pages of Shakespeare; but since the days of the great prototype, there has never ceased to exist a line of descendants who have re-echoed in various ways the beliefs of the original philosopher, because they have found a counterpart of the demoralisation of Denmark in the surroundings of latter-day life.

Judging by recent developments certain gentlemen have been playing Hamlet in regard to the conduct of municipal business in certain departments of the Manchester Corporation. Our concern in the matter begins and ends with the fact that the overhauling of one particular department has led to some strange and unfortunate revelations about the sewage works.

We know that the question of treatment has proved a knotty one, but in urging the Rivers Committee to address themselves strenuously to the task of solving it, we had no idea that there was the slightest risk of their endeavours being hampered by having to work with defective tools. Yet the following report leaves little room for doubt as to this actually being the case.

It appears "that the shafting to lift the screens is totally inadequate for the work it has to do; that the columns on the central passage to support the roof, through mismeasurement have been cast too short, and in consequence had to be placed on stone bases, one of which has cracked through; that proper provision has not been made to support the iron girders over the catch pit; that the enamelling of the sluice gates and frames not having been provided for at the proper time, extra expense has been incurred in doing the work and erecting coffer dams; that the necessary stones and wall boxes have not been provided during the construction of the building."

Apart from its bearing upon the difficulties of treating the sewage, it is this sort of thing that explains why sewage always seems to be associated with heavy expenditure—expenditure which is frequently so burdensome that the subsequent conduct of the works and the actual treatment has to suffer. If less money was allowed to filter away during the construction of the works, it is probable we should not hear so much about the heavy cost of chemicals, etc., rendering it imperative to starve this department until the daily dose of chemicals is reduced to an amount which is really only an apology for treatment.

We thought that however difficult the position might be in regard to the actual treatment, the engineering equipment and facilities were second to none in the Kingdom. Well! we know different now, a fact which is not rendered any the more palatable by the knowledge that nobody in particular seems to be to blame. Yet blame there is, and it must attach somewhere unless the sewage works have been everybody's business and consequently nobody's.

We are glad to say this particular point has nothing to do with us. The thing we have to lament is that the newly-appointed Royal Commission on Sewage Disposal should have just been accorded permission to pay a visit of inspection to the works when their deficiencies are so prominently to the fore. Moreover, it is the existence of such a state of affairs that gives bodies like the Mersey and Irwell Joint Committee a handle which they are not slow to grind. And then we wonder why so little progress is made! With such internal difficulties to contend with it is more a case for pity than blame as far as those directly engaged in solving the sewage problem are concerned. Poor Rivers Committee.

THE CLAYTON ANILINE WORKS FATALITY.

THE Manchester City Coroner, Mr. Smelt, resumed on Wednesday the inquest into the circumstances attending the death of William Clay, aged 41, who was killed at the Clayton Aniline Works on Monday, July 18th. Mr. J. H. Rogers, Her Majesty's Inspector of Factories, was present during the inquiry, and the proceedings were watched on behalf of the company by Mr. Ogden (Messrs. Diggle and Ogden, solicitors).

According to evidence previously given the deceased was working in the drying room at these works on the day named when a loud dull sound was heard, followed by a flash of fire and a dense cloud of smoke. In a moment the place was on fire, and there was a general stampede of the workmen. The deceased did not get out, and was so badly burnt that he died at the Ancoats Hospital on the following Wednesday. An examination of the premises after the fire revealed no traces of an explosion, and there was nothing to suggest how the fire had been caused. The inquest was adjourned in order that samples of the colours which were in the room when the fire occurred might be submitted to the Home Office for examination.

Dr. Dreyfus, managing director of the company, now said they had thought the matter over very carefully since the inquest was adjourned, but were unable to form any theory as to how the accident was caused

The Coroner: Then the same accident may occur again?

Dr. Dreyfus: Oh, no; I don't think so. We have removed the gas jets.

The Coroner said that he had communicated with the Home Office on the matter, and had received a reply from Captain Thomson, one of the inspectors of explosives to the Department. Captain Thomson wrote that in conjunction with Dr. Dupre, chemical adviser to the Home Office, he had carried out some experiments with the samples of dye materials submitted by the Coroner. These proved that each of the four samples was practically free from explosive qualities, and that even when heated to temperatures considerably above those possible in a drying room they did not give off vapour capable of causing an explosion. Whether or not an explosion occurred, he was satisfied that it was not directly due to either of the four samples of dye material present. If a fire preceded the explosion, it was possible that the latter might have been due to the sudden influx of air meeting with the products of partial combustion. Under these circumstances, said the Coroner, he did not think it necessary that Captain Thomson should attend the inquest, and he had written to him to that effect. The opinion of Dr Dreyfus and Her Majesty's factory inspector, that these dyeing materials did not constitute an explosive, was confirmed by Captain Thomson's experiments, but, of course, if the jury thought proper they could require that gentleman's attendance at court. The only additional evidence he proposed to take was that of the plumber who had examined the drying-room since the accident happened.

John M'Culloch, plumber, 173, Ashton New Road, Bradford, said he examined the drying-room at these works within half an hour after the fire had occurred. He made a careful examination of the gas-pipes, and found that there was no leakage at all from them. The burners were in good condition, but the jets had since been taken away altogether. Without the taps were turned on there could have been no leakage of gas. Both taps were turned off when he went in. He could form no opinion as to what had caused the fire, but he was certain it was not the gas.

A Juror: I thought one gas was burning at the time.

The Coroner: We were told that both were lighted.

M'Culloch: As soon as the fire occurred I turned off the gas at the mains.

The Coroner: If both jets were burning it could not have been an explosion of gas.

Mr. Ogden: The manager of the department is here, and he has a theory as to how the fire might have been caused, if the jury would like to hear him. The company were very anxious to elucidate the mystery as far as possible.

Arthur George Green, manager and chemist of the colour department at the Clayton Aniline Company's works, said he had considered all the facts of the case in order to arrive at a conclusion. He had come to the conclusion that the gas burner, which was a swivel burner, had been turned on one side, and probably over one of the colour trays. If a spark of red hot rust had fallen off the burner it might have dropped into the loose colour, and so set it on fire. The combustion would start throwing up dust, and this dust might cause an explosion, or rather, a rapid combustion.

Dr. Dreyfus intimated that he had nothing further to suggest, and the Coroner upon this said he was afraid they could not carry the case any further.

The jury returned an open verdict.

Replying to Mr. Ogden, the Coroner said it was perfectly clear there was no evidence to indicate any neglect on the part of the company, and the jury expressed a similar opinion. The Coroner further pointed out that in the absence of definite evidence no other verdict was possible than that which had been returned.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for July. The total shipments were 89,982,155 gallons, compared with 89,083,369 gallons in 1897. The total for the seven months ending July, 1898, was 579,621,050 gallons, against 550,809,642 gallons in the same period of 1897. The details of the shipments are as follows:—

	Gallons.
CRUDE PETROLEUM.	
Total, July, 1898	10,782,816
,, ,, 1897	9,928,536
NAPHTHAS.	
Total, July, 1898	823,790
,, ,, 1897	317,391
ILLUMINATING.	
Total, July, 1898	73,324,985
,, ,, 1897	71,902,341
LUBRICATING AND PARAFFIN.	
Total, July, 1898	4,424,050
,, ,, 1897	4,042,057
RESIDUUM.	
Total, July, 1898	626,514
,, ,, 1897	2,893,044

PRICK'S PATENT CANDLE CO, LTD.—The following is the statement of profit and loss account submitted to the extraordinary general meeting of the company held on the 9th inst.:—The balance of profit in hand shown by the accounts laid before the general meeting in March was £56,326., from which has been deducted, dividend 17s. 6d. per share paid March 19th, £32,812.; reserve fund, £5,000.; on account of depreciation on fixed properties, £12,500., leaving a balance of £6,013. The profit of the six months to June 30th last was £35,029., from which deduct income-tax £1,257., leaving a balance of £33,771., making a total available of £39,785. Dividend to be declared at the meeting 15s. per share, £28,125., leaving in hand to be carried forward £11,660.

THE STANDARD OIL TRUST IN CANADA.—The report is current that the Standard Oil Trust has just completed its conquest of Canada. For years the gigantic monopoly has tried to get complete control of the Canadian refining business. With the help of the railway companies it has at last succeeded. It crushed its rivals in the United States by the same methods. It got the railway companies to return the oil tanks, in which it has a monopoly, free of charge, while Canadian refiners had to pay stiffly for the carriage of the barrels which they used for their oil. This margin was sufficient to bring the Canadian refiners to terms, and we are informed that two weeks ago the last independent refinery in Canada passed into possession of the American monopoly. The price of oil has been raised by a penny a gallon. This, however, is not the most serious part of the business. There are great deposits of petroleum in Canada yet untapped. There was a future for Canadian refiners had they held out until the flash-point was raised in this country, when they could have competed on equal terms with the American monopoly. Now a source of wealth in the Dominion has passed into the hands of the Rockefellers and a colonial industry has been destroyed. [This throws a fresh light on the tactics of the low-flash advocates in this country. The "conquest of Canada" has been "announced" so often, just when the Rockefeller crew were itching to control the Canadian trade, that even these details leave a taste of salt in the mouth in the absence of direct confirmation. ED. C. T. J.]

The Patent List.

t is compiled from Official sources in the Manchester Laboratory, under the immediate supervision of Davis and Alfred R. Davis, who report professionally a'ue of Chemical Patents.

CATIONS FOR ENGLISH LETTERS PATENT.

Metals from Ores. E. Bohon. 18,032. August 22.
ies. J. Wilson. 18,074. August 23.
e of Metallic Carbides. W. L Wise. 18,110. August 23.
lloys. A. J. Rossi, J. MacNaughton, and W. D. Edmonds 18,127.
3.
and Materials for Bleaching. E Hungerbühler. 18,218.
1.
cetic Acid. J. Farmer. 18,256. August 25.
e of Cellulose Tetracetate. C. O. Weber, C. F. Cross, and nburg. 18 283. August 25.
suming Furnaces. G. Langenbach. 18,348. August 26.
ubber. G. Verberckmoes 18,364. August 26.
n Chambers for the Manufacture of Vitriol. T. Meyer. August 26.
ead Sulphide Ores. E. Ferraris. 18,424. August 27.
es. J. C. Montgomerie. 18,447. August 27.

ACTS OF LATEST COMPLETE SPECIFICATIONS.

tracts are specially prepared for the Chemical Trade Journal, IGHTS *of publication are* RESERVED. *This is the earliest tracts of Chemical and allied patents accessible to the public.*

ts in the Process and Apparatus for Decomposing Chemical ations. H. Niewerth, Friedrichstrasse, Berlin. Eng. Pat., 18,327. h, 1897.

ratus is specially designed for the smelting of ores. Three ns are enclosed in a furnace, so that the walls of the ovens by a series of fires. The central oven is filled with the ore ed, and the outer ovens are charged with coal or coke, mes red hot. A reducing gas; such as a mixture of carbon nd hydrogen, is then circulated by a pump. It is heated in n, reduces the ore in the second, and the carbon dioxide to monoxide again during its passage over the hot carbon oven. By reversing the current of gas, the first and third ually utilised. All three ovens are charged from the top, d with doors which prevent the loss of any gas. There are showing the arrangement for iron smelting.

ts in Apparatus for the Treatment of Sewage and other D. Cameron, 1, Sylvan road; F. J. Commin, 7, Bedford Circus; Martin, Bradninch House, all of Exeter. Eng. Pat., 27,349. Nov.
r.

ntion relates solely to mechanical arrangements for operascharge valves of filter tanks, etc. There are four figures the apparatus, which embodies an adaptation of the float lever principle. The figures are essential to an adequate of the mechanism.

rocess for the Manufacture of Carbonic Acid and Apparatus . H. S. Elworthy, 63, Guildford-street, London (temporarily), and I. S King and Co., 65, Cornhill, E.C. Eng. Pat., 25,027. October
.

carbon dioxide is superheated by being passed through a hot-blast stove, and then passed over incandescent carbon. ng monoxide is converted into dioxide by contact with e, mixed with some inert body and packed in a cupola. By the hot-blast stove the heat lost by the conversion of the rbon dioxide is replaced. There is one figure, the plant bed at great length in the specification.

ts in and in the Manufacture of Tubing or Hose particu-licable for conveying Oil Gas. F. Reddaway, of the firm of F. and Co., Ltd., Pendleton, Manchester. Eng. Pat., 23 630. October
.

ary forms of Sphincter-grip hose rapidly deteriorate owing of the hydrocarbons in the oil gas on the rubber. To the tube is built on a coil of steel wire, which constitutes all. Over this several plies of canvas duck, dipped in ion, are wrapped, so that the plies adhere. On to this body ber tube is slipped, or built up from strips. This is, in turn, covered with several plies of plain canvas duck, and the tube finished with the usual wire coils on the Sphincter-grip principle. There are two figures. The inner steel coil not only protects the rubber, but prevents the tube collapsing, and so stopping the flow of gas.

Manufacture of Conglomerates containing Alkaline Oxidising Bodies for Bleaching Linen and other Objects. L. H. Freutz, Laeken, Brussels, Belgium. Eng. Pat., 27,049. November 18th, 1897.

Peroxides of soda, potash, magnesia, etc, are mixed with silicate of soda, or other suitable body which assists the cleansing action of the mixture, while it enables the mass to be exposed to the air without material depreciation. One method of preparing the mixture is to incorporate 2 kilos. (4·4 lbs) with 43 kilos. of liquid sodium silicate at a temperature not exceeding 40°C., and then to add 55 kilos. of powdered carbonate of soda An alternate method, to which preference is given, is to dissolve 53 kilos. of sodium mono-silicate in water, to form a solution of 1·65 sp.gr., and cool to 50°C. Little by little, 42 kilos. of dry sodium carbonate are then stirred in, and the agitator kept at work until the temperature falls to 32°C., when 5 kilos of sodium peroxide are thoroughly incorporated with the viscous mass. By preference the peroxide should be as granular as possible. The mass, when properly mixed, is run into moulds and left to set. It can then be sawn into blocks, which are finally dipped into a solution of sodium silicate to afford better protection from the air and moisture. The latter end is hastened by exposing the blocks to an atmosphere of carbon dioxide.

An Anti-Corrosive Damp-Resisting Paint. T. Turnbull, Bridge Cottage, Wormit, Fife, N.B. Eng. Pat, 10,263. May 5th, 1898.

It is claimed that the following paint can be used like ordinary paint and is quick drying:—200 lbs. of virgin pitch are melted (not boiled) and 10 lbs. of resin well stirred in. In a separate agitator 18 lbs. of dissolved Para rubber, 27 gallons of crude naphtha, and 10 lbs. of sifted whitening are thoroughly mixed and poured into the melted pitch and resin. The mixture must be kept agitated until the whole has cooled down to a temperature of 45°F.

ANSWERS TO CORRESPONDENTS.

M.L.—Your suggestion has been under consideration by us before, and has again been further looked into. Individually the matter is simple to deal with, but collectively the cost is prohibitive.

W.B.G.—We are looking into the matter, but have doubts whether it is of sufficient general interest to warrant our carrying out your proposal.

C. L. & Co.—The only other firm we know is The London Chemical Co., Ltd., Bow Bridge Wharf, E.

W.W.O.—Yours of 7th inst. to hand; we will see what we can do in the matter, and write you.

NITRATE STATISTICS.—The Permanent Nitrate Committee, in their public statistical circular for September, 1898, give the total exports of nitrate of soda to Europe during August as 1,350,000 qtls.; loading for Europe, 1st September, 1,791,000; imports, Europe, August, 58 260 tons; deliveries, Europe, August, 40,370; visible supply, Europe, 1st September—stocks and afloat, 256, 70 tons. The August shipments to Europe were only 61,000 against 66,000 tons in 1897, and 25 per cent having been tacked on to the "deliveries," although arrivals were the same as last year, the "visible supply" at 260,000 tons compares very favourably with the 358,000 tons of twelve months ago. Indeed, the statistical position would justify an advance in the price of nitrate, were it not for the sword of Damocles hanging over the market in the shape of 520,000 tons awaiting shipment in Chili. Tonnage, which until lately has been very scarce, will pour into the nitrate ports towards the end of the year, and the November-December shipments will beat record; these will be followed by heavy steamer exports in January-February, for stocks on the coast will, at the present rate of production, amount to 340,000 tons at 31st December, even if the 1898 shipments reach the maximum twenty-six millions of quintals. Under the circumstances the listlessness of the trade is not to be wondered at. Due cargoes at 7s. 3d. and autumn sailings at 7s. 6d. per cwt. are nominally at last year's parity, while the f.o.b. price is about 4d. per quintal lower. Thanks, however, to the fall in exchange, which reduces cost of production, all oficinas with decent grounds are doing fairly well, and will continue to thrive if the total output is kept within reasonable bounds. This is the difficulty, and there are as yet no signs of its being overcome. The value attached to fanciful "combination" schemes can be gauged by the fact that the acceptance in principle of the proposed new combine by forty-six out of forty-seven producers assembled at Iquique on the 25th ult. tended, if anything, to weaken the market. The chances are that in the absence of political accidents in Chili, the European consumer will again get cheap nitrate of soda next season.

Our Book Shelf.

Manual of Chemical Analysis. By G. S. Newth. 462 pp., including Appendix and Index. 100 illustrations. London: Longmans, Green, and Co., 1898. 6s. 6d.

As a general rule most of Mr. Newth's contributions to chemical literature are welcome and refreshing, and the present work is far from an exception. It is divided into books, the second of which is sub-divided into two parts. The first book deals with qualitative analysis, which does not afford scope for much originality of treatment, but we can honestly commend chapter vii. to students, as one of the best explanations of the "phosphate" difficulty we have read. This bugbear will lose its terrors in a remarkable fashion when this chapter has been mastered.

In Book II. the gravimetric methods of quantitative analysis are first taken, and ably handled. Volumetric analysis follows, to be superseded by gas analysis and "combustions." The book concludes with a description of such physical experiments as determining specific gravities, boiling points and vapour densities. This arrangement works out admirably.

From start to finish—preface included—the text and illustrations bristle with hints, and explanations of little points in manipulation, which make the work invaluable to the budding analyst.

The author fully appreciates the advantages of "talking" by sketches, and never fails to effect an indelible impression on the student's mind by a few happy strokes of the pen whenever the occasion presents itself. We could instance many points which are most efficiently described by three sketches and about as many lines of type, in place of the not unusual half-page of printed matter.

In regard to this book we have only two words of advice for teachers and students alike—get it; and to say that without further qualification is saying a great deal.

Soaps. By George H. Hurst. 385 pp., including Index and Appendix. 66 Illustrations. London: Scott, Greenwood, and Co. 1898. 12s. 6d.

This work is mainly composed of a series of articles which originally appeared in the pages of the "Oil and Colourman's Journal." There has been no attempt to prepare a complete treatise on soaps, but rather a practical, though scientific, consideration of the chief processes entailed in the manufacture of soaps. Thus the alkalies, oils and fats, perfumes, and machinery required are described in the first six chapters. The remaining four chapters are devoted to the technology of soap-making and its analysis (both of which are good); the recovery of glycerine; and the arrangement of a factory. Much useful information is conveyed in a convenient and trustworthy manner, which will appeal to practical soapmakers. There is one point under "Oil Extraction with Solvents" which requires modification, since an apparatus is described and illustrated as if it were really a practical extraction apparatus, whereas we know it has never yet attained to the dignity of working with even reasonable success. With this exception the book seems well up-to-date and reliable as a guide to the technology of soap-making.

Judged from a typographical point of view, it is a pity the neat get-up is marred by careless "reading," which vitiates some equations, and otherwise detracts from the credit of production. It is a pity to duplicate an illustration in the same work, even when it is a good one, which in this instance is not the case.

These minor points, however, will not injure the work in the eyes of those who seek practicability before perfection, while analytical chemists will find a question worthy of further consideration in reference to the estimation of total alkali in soaps. A number of typical formulæ, covering almost all classes of soaps, are included in the chapter on the technology of soap-making.

Mineral Resources of the United States for 1896 and 1897, in Two Parts. By D. T. Day. 1,400 pp. Washington: Government Printing Office, 1898.

These volumes form a part of the gigantic work carried on by the director of the U.S. Geological Survey (C. D. Walcott). The books are excellently printed and bound, and constitute a mine of information about all things that are mined, quarried, or pumped in the States. Coke ovens and coke production are on the increase. The features of the year in petroleum are summed up in three headings:—(1) Increased production, the out-put being a record in the annals of the industry; (2) An increase in stocks; (3) Decrease in price. The production of soapstone is practically at a standstill. Cement production has increased about 56 %, notably in the Leheigh County and Phillipsburg (N J.) districts. In the former the cement rock is remarkably free from magnesia. The out-put of corundum and emery is about stationary, and the suggested electrical conversion of emery into corundum seems to have died a natural death. We note that no notice is taken of "Carborundum" under the heading of abrasives. Perhaps next year it will find a place. There is nothing fresh concerning phosphate rock save the extension of the Tennessee fields by the discoveries at Mount Pleasant. The out-put of sulphur was 5,260 short tons, an increase of 50 % on the preceding year. The Sicilian sulphur combine will, it is prophesied, lead to a phenomenal increase in the production of pyrites, and certainly a number of the burners are being modified to meet the changed conditions. The out-put of pyrites was 115,483 long tons in 1896—a record. The mineral occurs in nearly every State, but only pays for extraction in four localities, viz.—Franklin County, Mass; Louisa and Prince William Counties, Va; and Gaston County, North Carolina. Gypsum shows a decrease of 15·5 % with a total of 224,254 short tons. Salt production has increased by 181,077 barrels of 280 lbs., but the value has depreciated to the extent of nearly $400,000. The historical review of this industry which is given is very interesting reading. Mineral paints seem in a healthy condition, especially Siennas. There have been important discoveries of fuller's earth in Florida.

AMERICAN COMPETITION IN THE IRON TRADE.

MR. S. T. WELLMAN, of Cleveland, Ohio, head of one of the largest engineering concerns in America, who has just returned from the congress of the Iron and Steel Institute, held in Sweden, spent several weeks among British manufacturers, and has given his views on the comparative conditions of the iron trade in England and the United States to a representative of the *Daily Chronicle*:—"It is an interesting fact," Mr. Wellman said, "that is just beginning to dawn on many Englishmen, that American steel and iron products are obtaining a startling hold as against British-made goods right here in Great Britain. I know within a very few days, for instance, of no less than 5,000 tons of American steel being sent to Harland and Wolff. Not long ago the city of Glasgow offered contracts for a large quantity of iron water-pipes. The lowest bidders (three) were all Americans. It chanced that there was a technical flaw in the bids which gave the astonished Scots a chance to re-advertise, and again the lowest bidder was an American, and though the pipes were of special lengths not often used in the States the American won the contract. I have just received from America the newly-compiled figures on American steel and iron exports, and I can tell you that, in spite of the war, in spite of the Dingley tariff, the American exports have reached the highest values in their history, and that prominent among them all are manufactured goods." "How do you account for that?" asked the interviewer. "Well, I account for it very largely by the fact of our improved manufacturing machinery, which machinery England is, singularly enough, deprived of by the fact that the labour unions will not permit the employer to avail himself of them. In other words, I manufacture an automatic machinery-making appliance. One American workman is able, and does, operate, six of these machines. The English labour union compels the manufacturer to put a man at each machine, which, naturally enough, shuts him off from competing with the American. The result you can readily appreciate when I tell you that for ten years American exports to Europe have gradually increased until they have wiped out the import side of the ledger and left us a handsome balance. The United States sold $30,000,000. of iron and steel products to European consumers, while in 1880 we exported only $12,000,000, and imported over $71,000,000. The exports of American steel rails advanced from $2,482,208. in 1897 to $4,613,376. for the fiscal year ended June 30, 1898. In ten years our exports of locomotives increased in value from $500,000. to $4,000,000. a year, and we are now sending locomotives to Egypt and Japan. Of course, I do not lay all this to the power of the labour unions. The development of cheap ores, increased facilities for lake transportation, and cheaper railroad rates have all had a hand in America's advancement. Railroad rates in America are one quarter less per ton per mile than English rates." "How did you find the conditions of the English working men as compared with Americans of the same class?" "I believe the Welsh coal striker to-day is better paid, better housed, and better fed than the average Pennsylvania or Ohio miner is. I believe the English workman is as well provided for, if he will work, as any in the world. That he will stand out against invention, and prohibit his employer from availing himself of the advances made by other countries, imposes a problem that is bound to tax the ingenuity of British statesmen to overcome."

Penny Postage with India.—The Government of India have taken the preliminary step towards the introduction of ocean penny postage. The rate for inland letters is to be reduced to one anna for one and a half tolas, which is slightly more than one ounce. This important reduction is to come into operation on October 1st this year, and it will involve an annual loss of six lakhs of rupees.

Legal Intelligence.

COURT OF SESSION.—EDINBURGH.

OUTER HOUSE.

(Before Lord Pearson.)

REID AND SONS *v.* BRIGGS.

son has issued his judgment in the action at the instance of and Sons, timber merchants, Ladybank, Fife, against ggs, asphalt manufacturer, Ladybank. The pursuers asked iat they were entitled to have the water of the wells on ty at Ladybank in its natural unpolluted state fit for l natural primary purposes, and that the defender had no ate the water or to discharge therein, or in close proximity noxious, impure, or unwholesome matter, or any chemical as to render the same unfit for domestic and other natural , or, in any event, unfit for use by the pursuers in their timber merchants. They also asked declarator that the d polluted the water, and interdict against his doing so. s concluded for payment of £550. as loss and damage. s stated that damage had been done to the tubes in their e impurities in the water. The defender denied having wells or that the pursuers had suffered any loss and damage his works.

hip's interlocutor was as follows: The Lord Ordinary, lered the cause, finds that the pursuers are entitled to have a the wells on their property at Ladybank in its natural tate, fit for domestic and other primary purposes, and that has no right to pollute the said water or to discharge n close proximity thereto, any noxious, impure, or unwhole- , or any chemical substance so as to render the same unfit and other natural primary uses, or unfit for use by the pur- business as timber merchants; finds that the defender has water of the well No 1 on the plan by discharging in ity thereto on his own ground large quantities of spent uor so as to render the said water unfit for domestic and l primary uses; finds that the pursuers have failed to prove their wells have been polluted by the defender with sul- either in a free state or in combination; and that they have prove that any part of the damage set forth in their state- had been caused through or by the said pollution of the with spent ammonia liquor or any causes for which the esponsible; finds, further, that the defender has failed to he remedial works executed by him are effectual to prevent ilar pollution; and with these findings appoints the cause d for further procedure, reserving all questions of expense, eave to reclaim.

ETROOT SUGAR INDUSTRY OF RUSSIA.

rate report on the growth of the beetroot sugar industry of , since the first factory was constructed in 1800, by Mr. th, has lately been published by the Foreign Office. The of the report is to show the magnitude and importance of the leading industries in Russia. The first factory was nded proprietor on his own estate in Tula province in 1800; 0 and 1840 there were over 600 factories at work, and it fter 1840 that the industry began to force its way into ssia. In 1860 the emancipation of the serfs having made it t for the landed proprietors to work the factories, the industry taken up by private firms and joint-stock companies; the better plant and machinery, were better built, and began n a greater scale. At the same time the number began to that, while in 1848 380 factories produced 19,272 tons, in factories produced 754,758 tons. In the early years of the of sugar was extracted from 4cwt. of roots; in 1830 this 6lb., in 1848 to 15lb., in 1882 to 35lb., and now to 44½lb., is increase being due to improved machinery and more tivation of the root. The mode of levying the Excise duty, l in 1848, has varied from time to time, the average being ood, while the average import duty has been 3r. 25c. per area under beetroot has increased steadily year by year; was 641,113 acres, while in 1896-97 it was 869,881 acres. of sugar from Russia has also been increasing in recent 86-87 it was slightly over 65,000 tons, and in 1896-97 it 0. Meanwhile the importation of sugar to Russia has decreased, although the consumption has greatly increased. alf the existing sugar factories are in Kieff and the adjacent In 1887 the Government sanctioned the establishment of a sugar manufacturers mainly to regulate the price and but in 1894 this body ceased to exist, and the Government itself took the matter in hand. The report enters in detail into the various measures taken to keep up the price in the home market. From a number of statistics which are given it appears that "the countries granting export bounties or artificially regulating the production and prices are the very countries whose populations consume least sugar per head. This emphasises very strongly the point that fostered industries are not for the general good, especially where these industries are producing quantities exceeding by 50 per cent. the present requirements of the population of the countries." The Consul thinks the Russian sugar industry has a great future; but it can only develop to its full extent when the system of taxing the home consumer and making him pay three times more than the price of the same sugar to foreign nations is abandoned. Exportation to European countries will increase, as well as to Asia, and, above all, the home consumption will increase enormously.

FERTILISING TURNIPS.

AMONG the various teaching institutions whose work has been duly recognised by the Board of Agriculture and duly appreciated by the country, there is none which has done more or better work than the Glasgow and West of Scotland Technical College. In Scotland at least the Agricultural Department of the College, headed by Professor Wright, holds a unique position in regard to a record of extensive and thoroughly efficient work. Instead of resting content with conducting in the college classes for instruction in agriculture and the allied sciences, Professor Wright and the other members of the agricultural teaching staff have strained every nerve to bring technical education home to Scottish agriculturists by conducting special classes for farmers and farmers' sons in the dead of winter, when farm work is slack, by delivering courses of lectures to farmers in numerous counties in Scotland, and by conducting important agricultural experiments in the numerous counties that come within the sphere of their operations. These facilities for receiving instruction in the science of agriculture and applying these scientific principles in every-day farm practice have been greatly appreciated by the farmers in the western and south-western counties, and Professor Wright's annual report on the results of the experiments conducted under his own personal supervision is always read with the keenest interest by the agriculturists of Scotland. The extent and usefulness of the teaching and experimental work conducted by the agricultural staff of the Glasgow Technical College have also been fully recognised by the Board of Agriculture. Indeed, it is an open secret that last year, when the Board's inspector was visiting the various centres of agricultural instruction and experiment in Scotland, he plainly intimated to the grant-receiving bodies in Edinburgh that unless they look a leaf out of Professor Wright's book and brought themselves more in touch with agriculturists by conducting special classes for farmers, by delivering extension lectures, or by conducting agricultural experiments on farms in the eastern counties, it might come to be a question whether the grant would be continued to them. The many farmers in Scotland who closely followed the Professor's experiments last year and watched their results are well aware that his forthcoming report will contain some very interesting matter with respect to the manuring of crops, notably the turnip crop.

TURNIPS AND POTATOES—

particularly turnips—remove a much larger amount of fertilising matter from the soil than any other crop which the farmer grows. Hence arises the generally-adopted practice of applying to the green-crop "break" the greater part, if not the whole, of the farm-yard manure produced on the holding in the course of the year. In connection with this practice, there is one important point on which his experiments last year gave very decisive results. Some prominent teachers of agricultural science have been inclined to hold that when a dressing of farm-yard manure had been applied to the land it rarely, if ever, pays the farmer to apply a dressing of artificials along with the farm-yard manure. This point was very fully tested by the Professor last year, when he conducted a series of experiments on the manuring of turnips on eleven different farms situated widely apart from each other. These farms were—Aucharna and Machribeg in Argyllshire, Lochlands and Muirhouse in Ayrshire, Hattonburn in Kinross-shire, Caigton and Congeith in the Stewartry, and Airleywight, Innerpeffray, Milton of Luncarty, and St. Colms in Perthshire. On each of these farms 13 plots of equal size were laid out, and were all, with the exception of two, manured with

DIFFERENT MANURES,

the remaining two plots being the "no manure" plots, answering to zero. On the 11 different farms the average produce of roots per acre on the one unmanured plot was 9 tons 11¾ cwt., and on the other unmanured plot the yield was 9 tons 13¾ cwt., so that the yield on each of the "no manure" plots was very uniform. One plot received a

dressing of 10 tons per acre of farm-yard manure, and on this plot the average yield of roots was 17 tons 4½ cwt. per acre, thus showing a large and profitable return for the manure applied, apart altogether from the fact that a large proportion—probably one-half—of the fertilising matter applied to that crop would be left in the soil for the use of the succeeding crops. The adjoining plot also received a dressing of 10 tons of farmyard manure, and this dressing was supplemented with 4 cwt. of mineral superphosphates, with the result that the average produce of roots on this plot was 21 tons 11½ cwt. Thus the addition of 4 cwt. of mineral superphosphate, costing some 12s. in all, resulted in an increase of over 4 tons of roots as compared with the adjoining plot, which was similarly treated in every way except that it got no artificials by way of supplementing the 10 tons of farmyard manure. In fact the plot which got 10 tons of dung and no artificials produced a smaller average crop than any of the manured plots, though in the case of the eight plots manured with artificials alone the cost of the fertilisers used in no case exceeded 33s. per acre. The relatively small return obtained by the application of 10 tons of farmyard manure alone is doubtless due to the fact that the fertilising substances in the dung are not so readily available for the use of the plant, and therefore are not so well adapted for pushing forward the plant in the earlier stages of its growth as a soluble artificial manure is. Anyway, the professor's experiments have made it clear that the common plan of giving a suitable dressing of artificial manure in addition to farmyard manure is as fully warranted by scientific experiment as it is by every-day experience.

As already noted there were eight plots manured with different mixtures of artificials alone, and the average produce on each of these plots was greater than that on the plot manured with 10 tons of farmyard manure alone, though the cost of the artificials in no case exceeded 33s. per acre. These different mixtures of artificials were so prepared as to contain equal quantities of the three great essentials of plant-food, namely, nitrogen, phosphoric acid, and potash. The following table shows the composition and cost of the mixtures used, and also the average yield of roots obtained from the plots which gave the best results:—

Manures.	Cost of Manures.	Produce of roots per acre.
643 lb. superphosphate 336 lb. kainit 102 lb. nitrate of soda	33/-	21 t. 14 c.
643 lb. superphosphate 336 lb. kainit 71¼ lb. sulphate of ammonia	30/10	21 6¾
321½ lb. superphosphate 346 lb. basic slag 1 cwt. sulphate of potash 71¼ lb. sulphate of ammonia	30/4	21 5½
643 lb. superphosphate 1 cwt. sulphate of potash 71¼ lb. sulphate of ammonia	30/6	21 4½
643 lb. superphosphate 1 cwt. sulphate of potash 102 lb. nitrate of soda	32/8	20 0
492 lb. pure dissolved bones 1 cwt. sulphate of potash	31/1	20 1¾

CONCLUSIONS.

The most important fact to be noted in connection with these results—apart from the highly satisfactory increase of crop obtained by the use of these cheap dressings of artificials as compared with the average yield of 9 tons 12 cwt. yielded by the "no manure" plots—is the place taken in the order of productiveness by the bone phosphate. The 492 lb. of pure dissolved bones contained as much phosphoric acid and nitrogen as was contained in any of the other mixtures, while the amount of potash applied to this plot was the same as was applied to the others. Many highly successful growers of turnips hold firmly by the idea that the phosphoric acid in bones is more valuable as a plant food than that obtained in mineral phosphate, but scientific theory teaches that phosphoric acid is the same substance whether found in bone or in mineral substance, and that scientific theory has here been fully borne out by scientific practice. Indeed, the phosphoric acid supplied in the dissolved bones has here resulted in a slightly lower yield than the phosphoric acid supplied in the mineral superphosphate, but it would be unduly straining the results of these experiments to make much of that fact. In any case, however, these results clearly demonstrate the unwisdom of farmers paying for the phosphoric acid in bones at a higher rate than they pay for the phosphoric acid in mineral superphosphate. This is an important fact, as is also the other fact demonstrated by these experiments—namely, that a suitable dressing of artificial manures may be very profitably used along with farmyard manure. The full report of Professor Wright's experiments will undoubtedly be read with great interest by farmers when it is published, as it will be very shortly.

THE CHEMICAL AGEING OF WHISKY.

THIS question has been considered at some length by Mr. George Hay, an analytical chemist who hails from Glasgow, and formerly from the United States. Some of his remarks are interesting, especially as they come from an analyst. Whisky, he says, when fresh distilled from what is known as a pot still has a disgusting odour and taste. The same whisky when put in a barrel and kept at 70 degrees F. for a certain length of time improves, the disgusting odour and taste disappear, and the fluid becomes more or less aromatic. I have been practising analytical chemistry (not commercial chemistry) in the United States for 26 years, and as yet I do not know what the influences are which occasion the change. Some shallow individuals say it is "time." It is not time alone. I have tasted whisky which had been in a bottle tightly corked for a hundred years, and am free to say that it had not improved at all. The cork of said bottle was covered with a fungus (penicilium), and the fungus was being devoured by an acurus (tyroglyphus), but even these scientific adjuncts did not improve the whisky. The whisky had been new when bottled by some one who had not lived to see the effect of this veritable experiment, and in quality it was new when I tasted it a century later. The fungus I examined microscopically. Whisky is not fit for use under four years in a tightly-bunged barrel, and at the end of seven years it is nearly as good as it can be, though it does improve slightly up to twelve years.

I have in my laboratory in the United States made for a distiller there quite a series of experiments in the ageing of new whisky by chemical means (knowing perfectly what I was about), and they all turned out to be dismal failures. I have about arrived at the conclusion that whisky cannot be improved by chemical means and be whisky, though it can be neutral spirit, an entirely different thing. As to the blending of whisky, that is a process which ought to be prohibited by law. It is simply mixing good (old) whisky with bad (new) whisky, and ought to be regarded as an adulteration. The evil effects of the bad (new) whisky are not neutralised by the addition of a certain modicum of good (old) whisky—it is simply a disguise. Then, again, as to the detestable practice of dilution, it is simply fraud. When the public buy whisky they ought to get whisky, and not grog made by the publican, even if the law allows such a practice. Water is dear at 18s. per gallon. The law attempts to prevent the adulteration of milk by the addition of water. Why should not this be the case as regards whisky? Possibly there are some publicans in the House of Commons—I know there are some sinners. As a means for the prevention of these adulterations and frauds upon the public, Scotland might learn from a country where frauds are very common—I mean the United States. In the State of Pennsylvania the retailer of spirits is allowed to sell to one adult up to one U.S. quart (32 fluid ounces), while the wholesaler is permitted to sell from one quart upwards to any quantity. But recently, as a guarantee against fraud, such as is common here, whisky in bond is bottled in presence of a Government officer in the bonded warehouse from one U.S. pint (16 fluid ounces) up to one quart. The necks of these bottles are sealed with a tin capsule, upon which is stamped the date of bonding and also the date of the opening of the barrel, so that the consumer knows to a day how old his whisky is. He knows, further, that there can be no adulteration, for it is a high misdemeanour to interfere with the stamp upon either the barrel or the bottle. By this means the consumer is guaranteed the genuine article; there is no blending and no dilution with water. Normal whisky ought to contain not less than 50 per cent. of alcohol, and it ought to be not less than four years old. It would be better if it were seven years old, and in that case the public ought to pay the necessary difference in price. But, on the other hand, no greedy publican or sinner ought to be allowed to lay his impious hands upon the whisky of the poor in the ways above indicated. I have of set purpose avoided in this letter all scientific details. I am not at present writing a treatise on whisky, though such a thing might be made a matter of both interest and consequence to the general public (not the publican), provided always there were some prospect of remuneration for the labour involved.

Much depends, it seems to us, upon the exact interpretation of the words "chemical means." We presume Mr. Hay excludes such physical agencies as heat and cold, or the physico-chemical practice of "racking?"

THE NEW CONVEYOR CO.—Probably one of the largest orders ever placed in this country for conveyors, elevators, and appliances for the general transmission of power, has been given by the Directors of the United Alkali Company, Limited, to the New Conveyor Company, Limited, Smethwick, for the new works on the Manchester Ship Canal, to handle coal, coke, and phosphate rock. About 1,000 feet of Mr. Gilbert Little's latest design of hot coke conveyor is to be supplied.

Reports of Companies.

CHROME MINES, LTD.

Under a winding-up order recently made against this company the statutory meetings of the creditors and shareholders were held last week before Mr. Cully (Assistant Receiver), at the Carey Street Offices of the Board of Trade, Lincoln's inn-fields. The company was incorporated in November, 1894, with a nominal capital of £150,000, divided into shares of £10 each. The object of its formation was to acquire chrome mines and mining rights in the Island of New Caledonia, and the directors throughout were Messrs. J. Ebbsmith, A Desmazures, and J. Higginson. By a purchase agreement dated November 24, 1894, and made between Mr. Alcide Desmazures and the company, the latter undertook to purchase from the former various chrome mines and mining rights in New Caledonia of which he was the registered owner, the consideration being £149 930, payable in shares. The mines and rights thus sold to the company were the joint property of Mr. Alcide Desmazures and Mr. John Higginson. In due course the purchase shares were duly allotted, but efforts made to raise working capital proved abortive, and the company never started mining operations At a meeting of the board, held in December, 1897, promissory notes for £600 in respect of directors' fees were drawn and given to Messrs. Desmazures and Ebbsmith, one for £400. was drawn in favour of the secretary for salary and office rent, and two other notes, respectively for £920. and £265., were given to Messrs. Desmazures and Ebbsmith in respect of cash advances and the expenses in New Caledonia All those promissory notes fell due on June 20th last, and the secretary, being unable to obtain payment of his note, issued a writ and obtained judgment for the amount, whereupon Mr. Ebbsmith petitioned the court and obtained a winding-up order. The failure of the company was attributed by Mr. Ebbsmith to the policy of the board of endeavouring to raise capital with which to work the mines and create a monopoly, instead of letting them on a royalty. A statement of affairs has been lodged showing liabilities £5,206. and assets £75,058., of which £75,000. represents the value of the mines The account with the contributories discloses a deficiency of £80,147.—The question of the appointment of a liquidator was adjourned generally.

NEW JULIA NITRATE CO., LTD.

A petition by C. E. Brooking for the winding up of the New Julia Nitrate Company, Limited, came before Mr. Justice Phillimore last week. Counsel for the company opposed the petition, observing that there were no assets of the company in England, no business being carried on, and no expenses incurred. Negotiations were going on for raising a loan whereby the company would be enabled to pay off the petitioning and other creditors of the company. Counsel for a shareholder for £6,000 supported the petition, observing that this company was going on year after year always holding out promises. Mr. Justice Phillimore: "If the petitioning creditor is not paid, and he thinks it is to his advantage to have a winding-up order, I do not see why the court should not make the order." Order accordingly.

STEEL COMPANY OF SCOTLAND.

The annual general meeting of the shareholders of the Steel Company of Scotland was held at Glasgow this week. The report, which has already been published, recommended a dividend of 5 per cent., carrying forward £3,310.—Sir Charles Tennant, honorary president of the company, said they were met under much happier auspices than was the case a year ago, or indeed for some years past. They had been able to pay the shareholders a dividend of 5 per cent., after providing for all the necessary works of the company, and thereby strengthening materially its position. This was more satisfactory almost than it looked, because it arose, not from improved prices, as prices had practically been only fractionally better than the year before. The improvement was due in the first place to the benefits derived from reconstruction of some of their plant, and to more economical and more efficient management throughout.—Mr. W. Lorimer (chairman of the company) moved the adoption of the report. Their deliveries of finished steel during the past twelve months had exceeded those of the preceding year, when a record was established in the history of the company, by about 3 per cent., and the invoiced value of their finished products had been within a few thousand pounds of a million sterling. Last year their manufacturing account showed a credit of £81,262. This year it was £91,488, or an increase of over £10,000. Their available surplus for the year was £68,498.—A Shareholder suggested the paying of an interim dividend.—The Chairman said he did not think that advisable. He thought, indeed, it was rather a dangerous thing for an industrial company to pay half-yearly dividends. He had had a great deal to do with public companies, and he thought the most satisfactory way was to balance their books once a year. In that way they were on better, safer, and more solid ground than doing it half-yearly.—The report was then adopted unanimously.

REPORTED VITRIOL COMBINE IN THE STATES.

EFFORTS are being made to bring together the makers of sulphuric acid under some working arrangement that shall be an improvement over the agreement which now controls them. It is a fact well known to those interested in sulphuric acid that the market was devoid of stability for many months preceding last Autumn, by reason of the keen competition brought about by the advent of some new makers, and the natural desire of all interested to control as much business as they could.

The demoralisation finally became so great and the profits so small as to prompt some of the makers, who had visions of better days in the industry, to make an effort to bring about some sort of an arrangement by which prices could be maintained, even though competition might continue as keenly as formerly in other respects. Several meetings were held, and the result was what is known as the "gentlemen's agreement," to maintain prices, and which is in force to-day.

In the history of trade understandings few cases are recorded of verbal or ordinary agreements having proved successful for any length of time. Usually some one of the participants becomes persuaded that he can circumnavigate the agreement without doing violence to his conscience, and the result is a return to former conditions as soon as his backsliding is discovered. In the case under consideration, however, it cannot be said that any violations of the understanding had come to light, when, at the April meeting of the manufacturers, it was proposed to form a more perfect union. It was generally admitted at that meeting that the "gentlemen's agreement" had been a success, and there did not appear to be any reason why it would not continue to serve its purpose, nevertheless the sentiment of many of those present was in favour of a closer bond between all parties. In the opinion of the "Oil, Paint, and Drug Reporter," it is very possible that feelings of mutual distrust had arisen, not for past sins, of which none had been discovered, as we stated above, but in anticipation of future possibilities, based on the past experience of several of those present, that the weaknesses of human nature might be relied upon to nullify any ordinary agreement in course of time. That their suspicions were well founded has since been proven, if reports of interested parties are correct, that evasions of the compact have since been discovered, although it is freely admitted that they have not been of such a nature as to seriously threaten its existence.

There was only an informal discussion of the question at the April meeting, but since then efforts have been made to bring the matter to a head and to perfect a scheme for consolidating all of the manufacturers. A meeting in the near future is contemplated, when it is hoped some progress toward the desired goal will be shown. Just what form the proposed combination will take has not been decided, but the prevailing opinion, so far as we can learn, appears to be in favour of the formation of a new corporation that shall absorb the acid plants of all of the manufacturers, with the possible exception of the Southern makers of chamber acid. With all interests merged into one concern, it is urged, many economies could be introduced into the business, such, for instance, as would result from the elimination of competition in the purchase of base material, in the selling of goods, in the saving of freights, through the filling of orders from the factories whose geographical location is nearest to the buyer, and in many other ways common to every business. It is believed that the industry could thus be placed on a more permanently profitable basis, without any advance in prices becoming necessary. There is a practical unanimity of opinion that an early consolidation is desirable, and it will probably soon become an accomplished fact.

Trade Notes.

THE PACIFIC BORAX AND REDWOOD'S CHEMICAL WORKS, LTD.—This company write, stating that their attention has been called to a paragraph circulated through the Press, to the effect that the Pacific Coast Borax Works have been closed down for an indefinite period. This, they state, does not refer in any way to their works in Europe, which are maintained at their full capacity. The refinery referred to is at Alameda, Cal., and work there is only being suspended in order to remove part of the installation to the new factory at Bayonne, New Jersey, just erected.

EXPLOSION AT A POWDER MILL.—A very serious accident has occurred at the works of the Cotton Powder Company, Upless Marshes, three miles from Faversham. Four female employés were dangerously injured by an explosion of detonators which they were testing. The accident occurred between seven and eight o'clock, the building being blown to pieces. Some of the victims have since lost their sight—permanently it is feared.

Fire at a Cement Works.—A fire broke out at Messrs. J. B. White and Brothers, Ltd, Swanscombe Cement Works, Greenhithe, on Sunday night. Two mills were destroyed and extensive damage done to the surroundings.

Manchester Resin Imports.—The Russian barque *Paul* has arrived at Trafford Wharf with a full cargoe of resin—4,230 barrels, from Savannah, Georgia. Although this is the first cargo of the kind that has come to Manchester by the Ship Canal for some time, there are still considerable quantities in stock upon the quays.

Prospective Lead Mining in Greece.—A party of Greeks paid a visit to a number of lead mines in Flintshire recently, with the object of inspecting the machinery, methods of working, &c. It is understood that the visitors have the intention of applying the knowledge thus gained to similar enterprises in their native country.

Testing Chinese Coal.—The Technical Chemical Institute at Berlin has examined five specimens of Shantung Coal from Ichufu, Hwer-sien, Yishwei, Szechuen, and Po-shan respectively, and states that, except the last, they are all considerably inferior to the coal of the Ruhr and Saar district, owing to their large proportion of ash and sulphur.

F. Bayer and Co.—An extraordinary general meeting of the Friedrich Bayer and Co's. Dye Works Company, of Elberfeld, has been summoned for the 24th inst. to pass resolutions empowering the directors to raise a 4 per cent. loan of £400,000, redeemable within 35 years at 105 per cent. to provide increased working capital and repay a balance of £135,725. of a 4½ per cent. loan issued in 1891.

More Dangerous Ice-Cream.—The chief sanitary inspector for Sunderland has just presented a report to the Health Committee on the manufacture of ice-cream in that town. In the course of his report he states that, with few exceptions, the premises where the ice-cream is made by the itinerant Italian vendors are wholly unfit for the purpose. The vendors are, as a rule, strangers to the washtub, and, with their compatriots, usually congregate in the common kitchen where the "cream" is made and stored. The committee will report to the Council, and it is expected that steps will be taken to remove the evil.

End of the Llanelly Gasworkers' Strike.—The Llanelly gas-stokers' strike was amicably settled at the offices of the company on Thursday. Mr. Thorne, general secretary of the Gasworkers' Union, and the manager and directors discussed the points in dispute for a couple of hours, with the result that the masters conceded all the demands of the workmen. The men have been out a week, and the town, consequently, has been in darkness each night. A number of workmen from the Labour Exchange have been imported by Mr. Graham Hunter, but the small quantity of gas manufactured was insufficient for lighting purposes, and factories and workshops, dependent upon gas for motive power, were practically at a standstill. The strike will cost the tradesmen a considerable sum, unless the intended claims against the company should be sustained. The claim of the Borough Council for lamp-lighting alone amounts to close upon £6,000.

End of the Welsh Coal Strike.—After lasting for five months the dispute in the South Wales coal trade has come to an end. At a conference held at Cardiff between representatives of the masters and the men an agreement was signed, embodying the terms set forth in the coalowners' ultimatum. While the employers have positively declined to recognise the principle of the minimum wage, they have conceded the renewal of the old sliding-scale agreement, to continue in force till January 1, 1902, and to be terminable at six months' notice on either side; the abolition of the monthly holiday; and an immediate advance of 5 per cent. above the wages in force on March 31st last. They have also consented to add a clause giving the workmen the right to give six months' notice of the termination of the agreement at any time after September 1, 1899, in case wages are reduced below twelve and a half per cent. above the standard of 1879; but in view of this concession they require that the terms of the agreement should be for four years from January 1, 1898, instead of three years.

Intoxicating Temperance Drinks.—At the Salford Police Court this week, before Mr. J. Makinson, the stipendiary magistrate, and other magistrates, Samuel Yates, herb beer seller, carrying on business at 31, Chapel-street, was summoned by the Excise authorities for selling intoxicating beer without a licence.—Mr. Thomas Magee, Inland Revenue officer for the Salford district, said that a bottle of "dandelion stout" was purchased at the defendant's shop in July, and on being submitted to analysis was found to contain 4·6 per cent. of proof spirit, the maximum quantity allowed by law being only 2 per cent. In fact, added Mr. Magee, the "stout" contained as much alcohol as the bulk of ordinary beer.—An Inland Revenue officer named Norman proved the purchase of "stout," which had been analysed.—The defendant said he was entirely ignorant of having committed an offence. He had manufactured the dandelion stout for eighteen years, and was not aware it contained so large a percentage of alcohol.—Mr. Makinson said he thought the defendant had offended in ignorance, otherwise a severe penalty would have been inflicted.—The defendant was fined 5s. and ordered to pay 10s. costs.

Northwich Urban Council and River Pollution.—At the meeting of the Northwich Urban Council on Tuesday, a letter was read from the County Council asking what steps had been adopted to put in force the Rivers Pollution Prevention Act. It was explained that in his report, Dr. Vacher (the county medical officer) had complained of the pollution of the rivers Dane and Weaver by the Northwich sewage. In reply, it was resolved to inform the County Council that Northwich occupied a unique position owing to subsidence which rendered it exceedingly difficult, by reason of the alteration in levels, etc., to properly deal with the whole of the sewage. It was further pointed out that a scheme, which would cost £25,000., was under consideration.

The Sugar Bounties Question.—A meeting, attended by influential delegates from the principal West Indian sugar-producing colonies, was held at Barbados on Saturday with the object of making a final and united effort to bring home to the British Parliament and people the critical stage at which the West Indian sugar question had arrived. Resolutions were adopted declaring that the proposed Imperial grants were appreciated both by Barbados and Antigua, but that the only effective remedy was the abolition of the bounties, which those present respectively demanded as British subjects. Continued loyalty to the mother country and the Throne was expressed, though some speakers suggested that, failing fair treatment from England, only one course was open—namely, an appeal for annexation to the United States. The meeting was fully representative. The fact that delegates undertook journeys of hundreds of miles in order to be present is referred to as evidence that the colonists fully realise the gravity of the situation.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are quiet at 9½d. for 90's and 50/90's. Naphthas remain unchanged. Carbolic acids are firm, without change in values. Anthracene is very dull, but pitch is rather brisker at 24s. f.o.b. East Coast. The tone of the market generally is quite of a holiday character.

Sulphate of ammonia is quiet, and prices have fallen. There is nothing doing for forward. Beckton still offers for prompt at £10. 5s. London outside makes figure at £10. 1s 3d. Liverpool, £10. 2s. 6d. Hull, £9. 17s. 6d. to £10. Leith, £10. 1s. 3d. to £10. 2s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

Business generally during the past week has been of a quiet nature, and there are no changes in prices to report. Bleaching powder still at £5. 2s. 6d. at makers' works; £5. 10s. to £5. 15s. f.o.b. Caustic soda has fair inquiry, but prices are unchanged. Soda crystals steady at £2. 7s. 6d. (bags). Saltcake firm at £1. 5s. to £1. 6s. Chlorates unaltered. Potash 3⅛d. and soda 3¾d. Sulphate of copper in moderate request at £16. 10s. f.o.b. Litharge firm at £16. 10s. per ton. Sugars of lead in rather poor demand. Acetates of lime somewhat dull, and but little business passing. We quote brown, £5. 2s. 6d. c.i.f.; and grey, £7. 2s. 6d. c.i.f. Acetate of Soda still sells at unremunerative rates. White powdered arsenic firmer and in good request; £15. 5s. nett Garston is to-day's value. Sulphur of all grades moves satisfactorily at former rates. Bichromates sell slowly; values: potash, 3½d.; soda, 2¾d. Phosphate of soda rather firmer, and better prices may be anticipated in the future. Oxalic acid remains unchanged. Yellow prussiate of potash sells freely, and prices are a little stronger; 6⅝d. per lb. is to-day's quotation. Carbolic acids are without quotable change. Sulphocyanides continue to be offered at low figures: barium, 4d.; ammonium, 6d.; alumina, 15%, 2s. 3d. per gallon. The general demand for textile chemicals is not up to the average.

REPORT ON MANURE MATERIAL.

There has been a fairly active market, and the tendency of prices all round is in an upward direction.

Mineral phosphates, especially high grade, continue to sell freely on the Continent at extreme prices, though there is not much of importance doing to U.K. ports, buyers being fully supplied.

There has been a further advance in East Indian bone meal, and sales have been made on spot at up to £4. 15s. per ton, ex store. This price is now asked for shipment, and it is doubtful whether much or anything less would be business, supplies on the other side being in very limited compass.

Nitrate of soda is, owing to arrivals, somewhat easier on spot, and 7s. 6d. per cwt. is being accepted for fine quality, ex quay.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron steady: Scotch warrants closed at 47s. 5d.; Middlesbro', 42s. 9d. cash; and hematite, 53s. 3½d. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed £52. 3s. 9d. to £52. 8s. 9d. cash, and £52. 7s. 6d. to £52. 12s. 6d. three months. Tin steady: Straits closed at £73. 7s 6d to £73. 17s. 6d. cash, and £73. 12s 6d. to £74. 2s. 6d. three months; Australian, £73. 17s. 6d.; English ingots, £76. 5s. Lead steady: Spanish, £12. 15s. to £12. 16s. 3d; English, £12. 18s. 9d; Silesian spelter, ordinary, £21 2s. 6d. to £21. 5s. Nickel, 1s. 2½d. Antimony, £37. Quicksilver: First hands, £7. 12s. 6d.; second hands, £7. 11s. *Copper shares* steady: Cape, $4\frac{11}{16}$ to $4\frac{13}{16}$; Copiapo, $2\frac{5}{16}$ to $2\frac{5}{16}$; Libiola, 2 to 2¼; Mason and Barry, 3⅝ to 3⅞; Rio Tinto, 29 to 29⅛; Tharsis, 6½ to 6¾.

GLASGOW, WEDNESDAY.—Market easy, and a good business; Scotch done at 47s. 7½d. to 47s. 6d. cash; and 47s 10d. to 47s. 7½d. month; buyers, 47s. 5d. cash; sellers, 47s. 6d. Cleveland done at 43s. cash and month; buyers, 42s. 9d cash; sellers, ½d. higher. Cumberland hematite done at 53s. 6d. to 53s. 4½d. cash, and 53s. 8d. month; buyers, 53s. 3½d. cash; sellers 53s 4d. Middlesbrough hematite, sellers, 52s 9d. cash.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—There is very little doing in palm oil, but nevertheless prices continue firm so far. Olive keeps steady, without any quotable change in values. Linseed is firm, with price well maintained at 18s. to 18s. 6d. per cwt. for Liverpool makes in export casks. Cottonseed is firm, with sellers at 16s. to 16s. 3d. per cwt. for Liverpool refined. Castor oil is slow of sale on spot, with the exception of first pressure French, which is quoted $3\frac{1}{16}$d. per lb.; good seconds Calcutta figure at $3\frac{1}{16}$d. ex quay, and 3¼d. store. Tallow is quiet, with a small business in South American at 21s. per cwt. Resin is steady at full rates, but the demand in all grades is rather quiet. Spirits of turpentine are selling moderately at 22s. 6d. per cwt. Petroleum is featureless, sellers offering Russian refined at 5d., and American at 5⅞d. to 7¼d.

CAKES.—Fair sales have again been concluded in American Western linseed on the spot, and with a very steady tone still ruling in the market the quotation is maintained at £6. to £6. 5s., whilst for some makes of Liverpool brands holders are asking 2s. 6d. advance on last prices, though the range of values is still given at £7. 5s. to £8. per ton, according to brand. Good to choice brands of American decorticated cottonseed have had a moderate sale at previous currencies, and the market is steady in tone at £5. 7s. 6d. to £5. 15s., according to quality, with a steady inquiry experienced for Liverpool makes at previous rates, viz, £5. 15s. to £6. 10s. per ton, according to brand. Liverpool undecorticated makes are in some instances held for more money, and still tend against buyers, but the quotation is so far unchanged at £3. 16s. 3d. to £4. 5s., with a moderately fair business doing thereat. Egyptian continue to have a steady market for spot parcels, and rather more inquiry is experienced, but as yet business is restricted by the extreme firmness of holders, who demand £3 15s. per ton for prime quality in store.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The general disposition here is more favourable to business, and prices realised continue to show a steady improvement, yet it is well recognised that the volume of business turned over this year is considerably less than last year. The mills here which usually have to fall back upon crushing rapeseed in the summer months have this year none to crush, having been forestalled by the continental crusher buying up the seed and sending his manufactured articles to supply this market. The following is a return of the stocks of seed held here ending August:—Linseed, 1,422 qrs. against 3,580 qrs. July; rapeseed 880 qrs. against 164 qrs.; cottonseed, 1,520 tons, against 1,685 tons. Imports for the month: Linseed, 8,012 qrs. against 58,950 qrs. July; rapeseed, 11,457 qrs. against 5,883 qrs.; cottonseed, 11,258 tons against 6,223 tons. Linseed oil is quoted 16s. per cwt., spot buyers, naked; forward October/December 15/6; boiled and refined, £1. to £1. 10s. per ton extra; refined cotton oil, spot naked, 14/2; forward November/April, 13/7½d.; crude ditto, 13s.; ordinary casks £1., and barrels £1. 10s. per ton extra. Tallow unchanged from £21. Olive oil steady and unchanged. Castor oil extracted here, £28. 10s. per ton, in barrels; 3 3-16d. per lb. in cases for first pressure; second pressure, £27. 10s. in barrels, and 3 1-16d. in cases. Olive oil soap unchanged, and promises to be cheaper with the advent of the new crop of olives about December. Cod oils, £16. to £18. per ton. Wool greases, from £8. per ton. Resins unchanged.

CAKES.—Mills here continue only partially employed. Linseed cakes quiet but firm. 95% pure, £7. 10s. Oilcakes £6. 7s. to £6. 10s. per ton; Russians, £6. 17s. 6d. to £7.; Americans, £6. 12s. 6d. to £6. 15s. Cotton cakes very little demand, yet values are firm and unchanged; best makes, £4. 2s 6d. to £4 3s. 9d.; seconds, £3. 17s. 6d. to £4. 1s 3d.; decorticated, £5. 17s. 6d. to £6. Rape cakes, Black Sea, £4. 2s 6d., nominal.

PAINTS.—Makers are well employed, with prices unaltered; the same applies to disinfectant manufacturers.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The main, and almost the only, sign of movement in the prices on the chemical market is the slacker position of sulphate of ammonia. Just after the sending off of last week's despatch one or two of the sellers showed signs of willingness to stimulate new business by a slight concession. Others of the sellers (the makers in this sense) are fully sold for the time being, however, so that the market must be held as still pretty healthy. Lead products incline a little more to the easy side, but otherwise the market is unchanged, and, generally speaking, dulness prevails. Mineral oils and solid paraffins offer no new feature. Paraffin spirit (naphtha) in fair call for manufacturing uses at 6½d. to 7d. per gallon.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s 6d. to £4 15s nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 15s. od. 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 25s od.; borax, English refined, £13. 10s, and boracic acid, £25 nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d, and 1-cwt casks, £6 15s. nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d less 5%, Liverpool; nitrate of soda, 7s. 7½d. to 7s. 9d.; sulphate of ammonia, £10. to £10. 2s. 6d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port; sulphate of copper, £16 10s. od. less 5% Liverpool; paraffin scale, hard, 1⅜d. to 1½d. per lb., and soft 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb.; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 6d, and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 141,408 mats cane unrefined; 27,285 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

There is no alteration in chemicals, either in price or position; business continues slow. Soda crystals are quoted at £2. 12s. 6d. per ton, gross weight, locally. Caustic soda, 76/77%, £8. per ton, and 70%, £7. 5s. per ton. Sulphur steady at £4. 15s. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett; do. hards, £5. 15s. per ton, nett; caustic soda, 76/77% £8. to £8. 5s. and 70% £7. 5s. to £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. per ton nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The market here has quietened down considerably, though prices for prompt shipment still continue fairly high. Best Northumbrian steam is quoted at 12s. 6d. to 13s. per ton, f.o.b. Coke is firm and in strong demand at 18s. 6d. to 22s per ton, according to quality. Best Northumbrian steam, 13s. to 13s. 6d. per ton; second qualities, 12s. to 12s 6d. per ton; small steam, 8s. to 8s. 3d. per ton; bunker coals, 9s. to 10s. per ton; gas coals, 10s. per ton; coke, 18s. 6d. to 22s. per ton.

New Companies.

Brymbo Co., Ltd.—Capital £25,000. in £10 shares. This company has been formed to acquire and carry on the business of The Brymbo Mineral and Railway Co., of Brymbo, Denbigh, and to adopt an agreement with Sir H. B. Robertson. The subscribers are:—Sir H. B. Robertson, Kt., Palé Corwen, Merioneth; J. Cullemore, Friars, Chester, solicitor; W. D. Haswell, St. John's Chambers, Chester, accountant; J. H. Darby, Brymbo, ironmaster; A. Darby, Wrexham, secretary; F. G. Whitwham, 8, Drapers' Gardens, E.C., gentleman; W. B. Burton, Eryl Arran, Bala, Colonel (retired).

Erasmic Co., Ltd.—Capital £100,000, in £10 shares (5,000 (preferred). This company has been formed to acquire from Joseph Crosfield and Sons, Ltd., certain trade marks, brands, secrets, etc., and to carry on the business of soap and candle makers, manufacturers of colours, dyes, and paints, chemical manufacturers, explosive manufacturers, engineers, etc. The subscribers are:—J. J. Crosfield, Netherdale, Frodsham, manufacturer; E F. Bernard, Bank Quay, Warrington, manufacturer; W. H. Robinson, 49, Wilson Patten-street, Warrington, secretary; E. A. Rice, 54, Manchester-road, Warrington, gentleman; H. Clayton, 230, Manchester-road, Warrington, cashier; G. H. Platt, Howley Quay House, Warrington, clerk; E. H. Bernard, 31, Avenue Mansions, Frognal, manager.

North Eastern Salt Co., Ltd.—Capital £10,200. in £1 shares. This company has been formed to carry on the business of salt merchants and dealers, rock salt proprietors, brine owners, miners of salt, alum, gypsum and limestone and manufacturers of chemicals, etc. The number of directors is not to be less than two nor more than five; the first are R. Grigg, J. W. Watson, W. W. Storr, R. Walker, and A. H. Whipham; remuneration as fixed by the company.

Norwegian Copper Mines, Ltd.—Capital £300,000. in £1. shares. This company has been formed to acquire, own, and work the copper mining properties, known as Birtavarre Sabetjok and Moskogaisa, and other properties in the Goulasjok Valley, Norway, and to adopt an agreement with the Venture Corporation, Ltd. The subscribers are:—A. W. Boon, 134, Fenchurch-street, E.C., clerk; B. H. Bourne, 50, Harleyford-road, S.W., clerk; C. G. Kistner, 56, Woodstock-road, Finsbury Park, N., clerk; F. Fincken, 100, Dempsey-street, E., electrician; E Fairweather, 3, Princess-street, E.C., secretary; J. G. Brotheridge, 5, St. Mildred's-court, E.C., clerk; H. A. Natland, 4, Fontarabia-road, Clapham Common, clerk.

Willesden Paper and Canvas Works, Ltd.—Capital £21,000. in £1. shares. (1,000 deferred). This company has been formed to acquire the business carried on at Willesden and elsewhere by the Patent Waterproof Paper and Canvas Co., Ltd., and to carry on the business of waterproofers, paper, canvas and rope makers, manufacturers of sheathings, linings, packings, etc. The subscribers are:—A. H. Gower, H 6, The Albany, Piccadilly, W., gentleman; J. B. Beyson, Kirklands, Christchurch-road, Reading, gentleman; A. E. Healey, 8, Nicholl-road, Harlesden, manufacturer; A. W. Taylor, 2, Royal Exchange Avenue, E.C., stockbroker; J. M. Symonds, 11, Queen Victoria-street, E.C, stock dealer; W. B. Edwards, 5, Garlinge-road, Brondesbury, N.W., chemist; F. Landon, 53, New Broad-street, E.C., solicitor.

Gazette Notices.

BANKRUPTCY ACTS, 1883 and 1890.
Adjudications.

Baker, B. H. (late carrying on business as Baker and Co.), Liverpool, drysalter.
Geldart, H. M., Blackburn, chemical works' manager.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 27th.

Acetic Acid—			
Holland,	50 pks.	R. W. Greeff & Co.	
Acetone—			
Germany,	30 dms.	Thames S. T. & L. Co.	
Belgium,	2	F. Bryant	
Acids—			
Holland,	60 pks.	Little & Johnston	
Alkali—			
Holland,	11 c.	H. Ewald & Co.	
Asbestos—			
Germany,	£84	C. Shaw Lovell	
France,	20	J. Coppo & Co.	
Barium Chloride—			
Germany,	22 cks.	Petri Brs.	
Barytes—			
Germany,	73 pks.	J L. Lyon & Co.	
Belgium,	35 cks.	W. Balchin, Ld	
Holland,	23	J. Graves	
Belgium,	543	J. L. Lyon & Co.	
Bleaching Powder—			
Germany,	128 cks.	J. M. Steel & Co.	
Bone Meal—			
E. Indies,	400 t.	A. Hunter & Co.	
,,	300	Walker, Howard & Co.	
Bones—			
Adelaide,	3 t.	L. & I. D. Jt. Co.	
Melbourne,	1	Flack, Chandler, & Co.	
Boracic Acid—			
Germany,	50 pks.	S. Lambert	
Caoutchouc—			
Holland,	255 c.	J. Owen	
Chinde,	8	Hale & Son	
B. Honduras,	3	L. & I. D. Jt. Co.	
Zanzibar,	95	Hale & Son	
Rangoon,	12	L. & I. D. Jt. Co.	
Germany,	64	Wallace Brs.	
,,	26	Prop. Bull Wf.	
Straits,	100	Huttenbach & Co.	
Zanzibar,	11	Clarke & Smith	
Africa,	51	L. & I. D. Jt. Co.	
,,	45	Brookes & Green	
Straits,	47	Elkan & Co.	
,,	105	L. & I. D. Jt. Co.	
Belgium,	14	Sawer, Sons & Co.	
Sydney,	10	Lewis & Peat	
U. States,	12	,,	
Straits,	325	E. Boustead & Co.	
Zanzibar,	298	L. & I. D. Jt. Co.	
Aden,	52	Wallace Brs.	
France,	1	Prop. Bull Wf.	
Germany,	170	H. Lambert	
Straits,	620	H. W. Jewsbury & Co.	
Carbolic Acid—			
Germany,	33 pks.	J. G. Back	
Castor Oil—			
France,	40 pks.	F. Bochin	
Italy,	20 cs.	A. & M. Zimmermann	
Caustic Potash—			
Germany,	123 dms.	J. M. Steel & Co.	
France,	20	W. E. Cole	
Chemicals (*otherwise undescribed*)			
Germany,	£344	L. & I. D. Jt. Co.	
,,	15	J. W. Drysdale & Co.	
,,	5	Drolenvaux & Bremner	
Sweden,	20	M. D. Co.	
Belgium,	30	T. Palmer	
Norway,	14 pks.	R. Greening	
Germany,	£389	A. & M. Zimmermann	
Belgium,	27	John Cockerill Line	
Holland,	63	T. H. Lee	
Belgium,	78	B. & F. Wf. Co.	
Holland,	5	Phillipps & Graves	
Germany,	36	R. W. Greeff & Co.	
Holland,	80	A. & M. Zimmermann	
,,	26	R. Greening	
U. States	1,030	S. C. Jones	
Cream of Tartar—			
France,	25 pks.	B. & F. Wf. Co.	
,,	6	G. S. N. Co.	
Italy,	81	B. Jacob & Sons	
France,	8	W. C. Bacon & Co.	
Italy,	16	Howards & Son	
Dyestuffs—			
Argols			
Italy,	310 bgs.	B. Jacob & Sons	
Cape,	7 pks	Lewis & Peat	
Italy,	186	Thames S. T. & L. Co.	
Cochineal			
Canaries,	2 bgs. 18 pks.	Swanston & Co.	
,,	20	T. Rennie. Sons & Co.	
,,	20 bls.	Forwood Bros. & Co.	
,,	5 pks.	Sperling & Williams	
Cutch			
Rangoon,	865 bxs.	Leach & Co.	
Extracts			
U States,	150 bxs.	Skilbeck Brs.	
Canada,	60 cks.	Furness, Withy & Co.	
,,	544	Boutcher, Mortimore & Co.	
Austria,	34 brls.	Fellows, Morton Morton & Co.	
U. States,	17	C. Zerenner & Co.	
France,	227	Union L. Co, Ltd.	
,,	450 cks.	T. H. Lee	
,,	40 cs.	Bailey & Leetham. Ld.	
Indigo			
E. Indies,	7 chts.	Park, Macfadyen & Co.	
,,	7	Kaltenbach & Schmitz	
,,	15	Parsons & Keith	
Myrabolams			
E. Indies	590 bgs.	Baxter & Hoare	
Tanners' Bark			
Auckland,	18 t.	G. H. Penney & Co.	
Belgium,	20	Leach & Co.	
Natal,	41	Flack, Chandler & Co.	
,,	31	A. & W. Nesbitt	
Germany,	33	Baxter & Hoare	
,,	103	Anning & Cobb	
,,	34	J. R. Francis & Co.	
N. Zealand,	39	Von der Meden & Co.	
Sydney,	103	Anning & Cobb	
Turmeric			
E. Indies,	100 bgs.	H. Devitt & Co.	
Farina—			
Holland,	50 bgs.	J. Barber & Co.	
,,	55 cs.	Phillipps & Graves	
U. States,	1 pk.	W. Wingate & Johnston	
,,	25	Gellatly & Co.	
France,	4 cs.	A. Fass	
Italy,	859 bxs.	C. Tennant, Sons & Co.	
Holland,	100 bgs.	H. Lorenz	
Felspar—			
Sweden.	£40	C. Riersen	
Glucose—			
U. States,	400 pks. 1,130 cwts.	R. G. Hall & Co.	
,,	500 500	C. F. Webster & Co.	
,,	1,000 1,000	Beresford & Co.	
,,	393 1,755	T. M. Duche & Sons	
,,	1,030 1,100	L. & I. D. Jt. Co.	
,,	410 1,786	L. Norman & Co, Ld.	
Canada,	500 500	L. & I. D. Jt. Co.	
Germany,	11 90	J. Knill & Co.	
,,	75 80	F. Stahlschmidt & Co.	
,,	45 368	S. M. Frankenstein & Co.	
Canada,	3,696 3,696	R. G. Hall & Co.	
Holland,	144 144	J. Barber & Co.	
France,	200 200	W. E. Cole	
,,	200 200	L. Norman & Co., Ld.	
Holland,	450 1,450	R. G. Hall & Co.	
,,	500 500	Trier, Meyer & Co.	
,,	250 250	E. Thompson & Co.	
U. States,	250 1,094	L. Sutro & Co.	
,,	500 500	C. Mangold & Co.	
Glue—			
Germany,	£15	L. & I. D. Jt. Co.	
U. States,	60	Taylor Brs.	
Holland,	190	T. J. & T. Powell	
,,	5	Phillipps & Graves	
France,	60	T. M. Duche & Sons	
Belgium,	665	J. Barber & Co.	
U. States,	57	L. P. D. Co.	
Germany,	21	Phillips & Graves	
France,	4	Mory & Co.	
Belgium,	4	Leach & Co.	
Glue Stock—			
Germany,	38 bls.	Hicks, Nash, & Co.	
Sydney,	9	Goad, Rigg & Co	
W. Australia,	10	Dalgety & Co., Ltd.	
Glycerine—			
France,	£160	J. Wilson	
,,	196	H. Hill & Sons	
Holland,	450	J. Barber & Co.	
Guano—			
Mexico,	20 t.	Praschkauer & Co.	
Infusorial Earth—			
Germany,	£31	Snowdon, Sons, & Co.	
,,	250	A. Haacke & Co.	
Manure—			
Germany,	63 t.	Perkins & Homer	
Methyl Alcohol—			
France,	2,800 gls.	Lister & Biggs	
,,	4,586	F. Bryant	
Mica—			
E. Indies,	£120	Parry & Co.	
,,	1,335	W. M. Smith & Sons	

Ceylon, 145 ,,
Germany, 4 Craven & Co.
E. Indies, 6 L. & I. D. Jt. Co.

Molasses—
Holland, 50 cks. 285 c. Barratt, Tagant, & Co
,, 702 3,600 J. R. Francis & Co.
U. States, 150 811 Deering & Robottom
,, 250 1,538 J. Forsey
,, 200 1,479 L. Sutro & Co.
,, 500 c.s. ,,
,, 50 300 Barrett, Tagant, & Co.

Naphtha—
Holland, 500 brls. J. Owen

Nickel Salt—
Holland, £30 R. W. Greeff & Co

Ochre—
Germany, 2 cs. Phillipps & Graves
Holland, 12 pks. ,,

Oxalic Acid—
Norway, 20 pks. R. Greening

Paraffin Scale—
U. States, 990 pks. Williams, Torrey, & Co.

Paraffin Wax—
U. States, 175 brls. H. Hill & Sons
Rangoon, 790 bxs. ,,

Phosphate Rock—
France, 240 t. West & Penrose
Bona, 200 A. Lord & Co.

Pitch—
Germany, 82 cks. Poth Hille. & Co.
Russia, 1,200 Fellows, Morton, & Co.
,, 300 W. F. Malcolm & Co.
,, 100 Linck, Moeller, & Co.
,, 100 Hoare, Marr, & Co.

Platinum Ore—
——, 4 c. H. Grey, junr.

Plumbago—
Ceylon, 107 brls. R. G. Hall & Co
,, 95 Doulton & Co.
,, 1,868 J. Thredder, Son, & Co
,, 380 W. French
,, 151 J. Perlbach & Co.
E. Indies, 51 W. France & Co.
Italy, 60 J. Thredder, Son, & Co.
Germany, 37 cks. B. Gallaway
Belgium, 1 kg. Morgan Crucible Co.

Potassium Bromide—
Germany, 10 cs. R. W. Greeff & Co.

Potassium Carbonate—
Germany, 720 c. J. M. Steel & Co.
,, 100 Petri Brs.

Potassium Chloride—
Germany, 100 bgs. F. W. Berk & Co., Ld.

Potassium Cyanide—
France, 10 cs. Burnett Brs. & Sons

Potassium Oxalate—
Holland, 30 cks. R. W. Greeff & Co.

Potassium Oxychloride—
Sweden, 100 kgs. G. Boor & Co.

Potassium Permanganate—
Belgium, 30 kgs Petri Brs.

Potassium Prussiate—
Belgium, 17 cks. Blagden, Waugh, & Co.
France, 24 J. Owen
Germany, 28 Rosenberg, Loewe, & Co.

Potassium Sulphate—
Germany, 1,026 bgs Anglo-Contl. Guano Works
Belgium, 50 Charles & Fox

Pyrites—
Spain, 1,969 t. C. Tennant, Sons, & Co
France, 24 Vokins & Co., Ld.

Rosin—
France, 10 brls. R. James & Co.

Salicylic Acid—
Germany, 46 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 16 cks. L. & I. D. Jt. Co.
,, 50 J. Hall & Son, Ld.
,, 16 P. Hecker & Co.
E. Indies, 302 bgs. A. B. Curtis & Co.
,, 630 Lucas & Spencer's Wf.
Germany, 350 S. E. Rly. Co.
E. Indies, 306 C. Wimble & Co.

Soap—
U. States, £151 W. Dixen
France, 4 Burnett Brs. & Sons
U. States, 2 L. & I. D. Jt. Co.
,, 5 W. Wingate & Co.
Germany, 4 Butler's Wf., Ld.

Sodium Hypochlorite—
Germany, 150 cs. H. Lambert

Sodium Hyposulphite—
Holland, 200 c. R. W. Greeff & Co.

Sodium Silicate—
Holland, £150 Phillipps & Graves

Starch—
Belgium, 1,170 cs. E. & T. Pink
U. States, 125 bgs. R. G. Hall & Co.
Holland, 580 pks. Little & Johnston
,, 802 cs. ,,
Germany, 40 Phillipps & Graves
Belgium, 390 F. Clayton & Co.
,, 110 Leach & Co
,, 276 T. H. Lee
,, 282 pks. Becker & Wagner
Austria, 55 M. D. Co

Stearine—
France, 300 bgs. G. Boor & Co.
Holland, 5 C. S. Lovell
Belgium, 126 H. Hill & Sons

Sulphur—
Italy, 40 t. Union Ltge. Co.
,, 40 G. Boor & Co.

Tar—
N. Russia, 200 brls. Linck, Moeller, & Co.
,, 1,444 W. F. Malcolm & Co.
,, 1,750 Hoare, Mann, & Co.
Germany, 100 W. Beard & Son

Tartaric Acid—
Holland, 4 pks. B. & F. Wf Co.

Ultramarine—
Holland, 5 cs. Hernu, Peron, & Co
Belgium, 20 cks. J. Harrison

Varnish—
Holland, 15 pks. Brasch & Rothenstein

Verdigris—
France, 2 pks. B. & F. Wf Co.
,, 4 cks. C. F. Gerhardt

Vermilion—
Hong Kong, 10 cs. Blundell, Spence, & Co.

Waste Salt—
Germany, 50 t. Perkins & Homer

White Lead—
Belgium, 18 pks. J. L. Lyon & Co
,, 45 brls. T. & W. Farmiloe, Ld.
,, 19 Perkins & Homer
Germany, 23 cks. H. B. Alder & Co
Belgium, 28 pks. C. S. Lovell
France, 17 J. Watt & Son
Germany, 30 Burrell & Co.
Holland, 59 A. & M. Zimmermann
,, 51 Wilkinson, Heywood, & Co.

Wood Pulp—
Sweden, 4,06 pks. W. G. Taylor & Co.
,, 2,00 Tough & Henderson
,, 320 H. Raby & Mather
,, 525 Christophersen & Co.
Norway, 400 Tough & Henderson
,, 155 Tegner, Price, & Co.
,, 3,605 W. D. Cork
,, 1,000 Page, Son, & East
,, 1,616 J. Sharp
Holland, 200 A. E. Reed & Co.
,, 100 C. S. Lovell

Zinc Oxide—
Holland, 60 brls. M. Ashby, Ld.
,, 4 pks. ,,
,, 4 J. Owen
U. States, 17 J. W. Cook & Co., Ld.
Germany, 50 cks. J. Matton
,, 500 Soundy & Sons
U. States, 200 brls. M. Ashby, Ld.

LIVERPOOL.

Week ending August 25th.

Acetic Acid—
Rotterdam, 33 bskts.

Albumen—
Naples, 6 cs. D. Maginis

Aluminium—
New York, 462 bxs. T. Ashbury

Alumite—
Sydney, 456 t. Australian Alum Co.

Aniline Salts—
Rotterdam, 4 cks.

Asbestos—
Genoa, 9 cs.

Barytes—
Antwerp, 45 cks. 50 bgs.

Bone Ash—
Zarate, 409 bgs.

Bones—
Cadiz, 144 sks.

Boracic Acid—
Leghorn, 10 cks.

Borax—
Valparaiso, 126 sks. Kleinwort, Sons & Co.
Leghorn, 57 brls.

Castor Oil—
Calcutta, 194 cs.
Leghorn, 15

Chemicals (*otherwise undescribed*)
Genoa, 17 brls. T. Martin & Sons
Valparaiso, 137 sks. A. Arramayo & Co.
Havre, 1 brl.
Rotterdam, 4 cs.

Colours—
Hamburg, 1 ck. 2 cs.
Rotterdam, 2 cks 6 tubs

Cottonseed Oil—
N. Orleans, 1,000 brls.

Dyestuffs—
Extracts
New York, 215 brls. M'Arthur
21 bxs. & Co.
Philadelphia, 60 brls.
Divi Divi
Hamburg, 100 bgs.
Fustic
Hamburg, 855 pcs.
Quebracho
Hamburg, 55 bgs.
Shumac
Palermo, 100 bgs. J. Kitchin, Ld.
,, 1,150 1 bl.

Glucose—
Boston, 50 brls. Hatricht, Baun & Co.
,, 300
,, 450 L. Sutro & Co.
Newport News, 400 bdls.
Hamburg, 1 ck.

Glue—
Hamburg, 8 cks.
Boston, 10 kgs. T. Robinson
65 crts. & Son
Rotterdam, 2 cs.

Guano—
Vera Cruz, 2 bgs.

Gypsum—
Naples, 80 cks.

Iodine—
Valparaiso, 130 kgs. A. Gibbs & Sons

Lithopone—
Hamburg, 40 cks.

Manganese Ore—
Hamburg, 8 cks.

Methyl Alcohol—
Antwerp, 10 dms.

Mica—
New York, 4 cks. 11 brls.

Paint—
New York, 1 bx. Staveley & Co.

Paraffin Scale—
New York, 1,102 brls. Thompson & Bedford
Baltimore, 100

Phosphorus—
Antwerp, 1 cs.

Pitch—
Hamburg, 1 ck.

Pummice Stone—
Messina, 55 bgs. 19 cs.

Pyrites—
Huelva, 2,003 t. Matheson & Co.

Rosin—
New York, 2 brls.
Hamburg, 1 ck.
Baltimore, 1,101 brls.

Salt—
Hamburg, 2 bgs.

Saltpetre—
Hamburg, 4 cks. 3 brls.

Soap—
N. Orleans, 1,391 brls.
Hamburg, 3 cks. 1 cs.
New York, 200 bxs. B. T. Rabitt
Newport News, 370 brls.
Boston, 30 cs.
New York, 15 J. Armstrong & Co., Ld.
Naples, 274 cs.

Soapstone—
Bordeaux, 100 bgs. Geo. G. Blackwell, Sons & Co.
Genoa, 300

Soda—
Hamburg, 1 pk.
Rotterdam, 37 bgs.

Sodium Nitrate—
Caleta Buena, 11,132 bgs.

Starch—
Hamburg, 80 cs.
Antwerp, 352 J. T. Fletcher & Co.
Baltimore, 800

Stearine—
Bordeaux, 100 bgs.
Antwerp, 13 J. T. Fletcher & Co.
,, 2 cks.
Rotterdam, 13 bls.

Sulphur—
Catania, 550 bgs. 50 brls.

Tallow—
New York, 25 hds.
Sydney, 839 cks.
Boston, 200 tcs.
Philadelphia, 150

Tar—
Hamburg, 2 cks.

Tartar—
Bordeaux, 21 cks.
Naples, 4

Tartaric Acid—
Hamburg, 4 cks.
Messina, 2
Rotterdam, 18

Ultramarine—
Rotterdam, 40 cks.

Varnish—
New York, 14 brls W. A. Warren
Rotterdam, 3 cks.

Waste Salt—
Hamburg, 305 bgs. & qty.

White Lead—
Antwerp, 16 brls. J. T. Fletcher & Co.
Rotterdam, 59 cks.

Zinc Ashes—
Philadelphia, 80 brls.
Boston, 53

Zinc Oxide—
New York, 100 brls.
Rotterdam, 20 cks. J. Matthews & Co.

Zinc White—
Rotterdam, 30 cks.

MANCHESTER.

Week ending August 27th.

Acetate of Lime—
New York, 414 bgs.

Acetic Acid—
Rotterdam, 20 cks.

Albumen—
Hamburg, 3 cs.

Alizarine—
Rotterdam, 30 cks.

Ammonium Chloride—
Rotterdam, 6 cks.

Antimony Bifluoride—
Hamburg, 2 cks.

Antimony Salt—
Hamburg, 5 cks.

Asbestos—
Genoa, 16 bls.

Barytes—
Rotterdam, 27 cks.

Castor Oil—
Antwerp, 27 brls. J. T. Fletcher & Co.
,, 4

Cement—
Antwerp, 500 bgs.

Chemicals (*otherwise undescribed*)
Hamburg, 4 cs.

Colours—
Antwerp, 7 cks. J. T. Fletcher & Co.
Rotterdam, 82 83 cs. 1 bx. 127 brls.

Extracts—
Halifax, 110 cks.
New York, 6 brls. 75 bxs.

Farina—
Hamburg, 100 bgs.
Rotterdam, 30

Glue—
Rotterdam, 25 bgs.
Treport, 5 bls.

Indigo—
Rotterdam, 10 chts.
Manganese Borate—
Hamburg, 1 ck.
Ochre—
Rotterdam, { 10 cks. / 20 bgs.
Paraffin Scale—
New York, 1,061 brls.
Potash—
Hamburg, 21 dms.
Rotterdam, 3 cks.
Treport, 2 16
Potassium Bisulphite—
Hamburg, 5 cks.
Pumice Stone—
Messina, 30 bgs.
Pyrites—
Huelva, 1,676 t.
Shumac—
Palermo, 125 bgs. 30 bls.
Sodium Nitrate—
Rotterdam, 3 cks.
Starch—
Antwerp, 590 cs. J. T. Fletcher & Co.
Montreal, 1,800 bgs.
New York, 700
Rotterdam, 166 cs.
Tannic Acid—
Hamburg, 3 cks. 3 cs.
Tar Salts—
Hamburg, 1 ck.
Tartar Emetic—
Hamburg, 26 cks.
Ultramarine—
Rotterdam, 4 cks.
Wood Pulp—
Halifax, 7,129 bls. 234 bf.-bls.
Montreal, { 8,359 / 2,940 bdls. 150 rolls
New York, 528
Rotterdam, 50 bls.
Zinc Oxide—
Rotterdam, 90 brls.
Zinc White—
Rotterdam, 65 cks.

HULL.

Week ending August 27th.

Acids—
Leghorn, 12 cks. Wilson, Sons, & Co., Ld.
" 7 brls.
Albumen—
Libau, 7 cs. Bailey & Leetham, Ld.
Barytes—
Antwerp, 161 cks. Bailey & Leetham, Ld.
Rotterdam, 155 Hull & Netherlands S S. Co.
Castor Oil—
Leghorn, 5 cs.
Chemicals *(otherwise undescribed)*
Antwerp, 73 pks.
Dunkirk, 16 dms. Wilson, Sons, & Co., Ld.
Gothenburg, 6 kgs. "
Hamburg, 28 cks. "
Stettin, 28 "
Rotterdam, 2 cs. Hull & Netherlands S. S. Co.
Colours—
Antwerp, 29 pks. Wilson, Sons, & Co., Ld.
Ghent, 45 cks. "
Rotterdam, { 16 brls. 2 bxs. / 113 cks. Hull & Netherlands S. S. Co. / 16 cs.
Stettin, 12 cks. Wilson, Sons, & Co., Ld.
Cream of Tartar—
Bordeaux, 1 ck.
Cryolite—
Copenhagen, 7 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Extracts
Bordeaux, 30 cks.
Hamburg, 1 Bailey & Leetham, Ld.
Valonia
Smyrna, 404 t.
Dyestuffs *(otherwise undes.)*—
Boston, 500 bgs. Wilson, Sons, & Co., Ld.
Farina—
Harlingen, 100 bgs. Hull & Netherlands S. S. Co.
Glucose—
Rotterdam, 50 bgs. Hull & Netherlands S. S. Co.
Glue—
Rouen, 21 cks. Rawson & Robinson
Ochre—
Marseilles, 29 cks.
Paint—
Antwerp, 36 pks. Wilson, Sons, & Co., Ld.
Boston, 25 cs, "
Copenhagen, 1 bfl. "
Genoa, 23 pks.
Phosphates—
Coosaw, 1,600 t. Hammond, Emes, & Co.
Ghent, 80
Pitch—
Copenhagen, 6 brls. Wilson, Sons, & Co., Ld.
Pumice Stone—
Leghorn, 83 pks. Wilson, Sons, & Co., Ld.
Saltpetre—
Hamburg, 50 kgs. Wilson, Sons, & Co., Ld.
Soap—
Amsterdam, 149 cs. Hull & Netherlands S. S. Co
Soap Stock—
Boston, 344 brls.
Soda—
Antwerp, 140 bgs. Bailey & Leetham. Ld.
" 10 Wilson, Sons, & Co., Ld.
Ghent, 210 "
Starch—
Amsterdam, 40 cs. Hull & Netherlands S. S. Co.
Antwerp, 5 bgs.
" 20 cs. Wilson, Sons, & Co., Ld.
" 80
Ghent, 250 "
Tallow—
Boston, 100 tcs.
" 197 brls. Wilson, Sons, & Co., Ld.
Tar—
Konigsberg, 100 brls.
Tartaric Acid—
Rotterdam, 12 cks. Hull & Netherlands S. S. Co.
Turpentine—
Bordeaux, 5 cks.
Libau, 12 brls. Wilson, Sons, & Co., Ld.
" 104
Ultramarine—
Rotterdam, 2 cs. Hull & Netherlands S. S. Co.
White Lead—
Rotterdam, 31 cks. Hull & Netherlands S. S. Co.
Wood Pulp—
Christiania, 2 083 bls. Wilson, Sons, & Co., Ld.
Drontheim, 1,000 bdls. "
Gothenburg, 182 bls. "
Helsingfors, 381
Zinc White—
Amsterdam, 38 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending September 1st.

Acetate of Lime—
Philadelphia, 417 bgs.
Alumina Sulphate—
Rotterdam, 200 bgs. J. Rankine & Son
Antimony Salts—
Hamburg, 1 ck.
Barium Chloride—
Rotterdam, 4 brls. J Rankine & Son
Barytes—
Rotterdam, 22 pks. J. Rankine & Son
Boracic Acid—
Leghorn, 5 cks.
Castor Oil—
Leghorn, 65 cs.
Marseilles, 2 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 10 cs.
Chrome Ore—
Symrna, 990 t. J. & J. White
Coal Products *(otherwise undes.)*—
Rotterdam, 1 cs. J. Rankine & Son
Colours—
Rotterdam, 102 pks. J. Rankine & Son
Cream of Tartar—
Marseilles, 4 cks.
Dyestuffs—
Alizarine
Rotterdam, 6 cks. J. Rankine & Son
Aniline
Rotterdam, 13 cks. 19 brls. 4 bxs. 6 cs. J. Rankine & Son
Aniline Colours
Hamburg, 16 pks 2 cs.
Extracts
Genoa, 40 brls.
Valonia
Smyrna, 496 t. Martin & Millar
" 70 bgs.
Glucose—
New York, 299 brls.
Glue—
New York, 96 brls.
Genoa, 74 cks.
Magnesium Chloride—
Hamburg, 50 dms.
Molasses—
New York, 600 brls.
Plumbago—
Genoa, 180 bgs.
Potash—
Hamburg, 40 cks.
Rotterdam, 56 J. Rankine & Son
Pyrites—
Huelva, 1,831 t. Tharsis Sulphur & Copper Co. Ld.
Rosin—
New York, 2,783 brls.
Saltpetre—
Hamburg, 5 cks
Soap—
Philadelphia, 638 pks.
Starch—
New York, 500 sks.
Stearine—
Amsterdam, 62 bgs. J. Rankine & Son
Sulphur Ore—
Huelva, 1,457 t. Rio Tinto Co., Ld.
Tallow—
New York, 105 tcs.
Tartaric Acid—
Rotterdam, 10 cks. J. Rankine & Son
Varnish—
New York, 3 cs.
Waste Salt—
Hamburg, 1,500 bgs.
Wolfram Ore—
Hamburg, 6 cks.
Wood Pulp—
Gothenburg, 96 bls. 203 rolls.
Montreal, 2,418 bdls.
Christiania, 288 bls. 93 cs.
Miramiche, 5,500 bls. A G. Kidston & Co.
Zinc Oxide—
New York, 100 brls.
Zinc White—
Rotterdam, 46 cks. J. Rankine & Son
5 pks.

TYNE.

Week ending August 27th.

Alum Earth—
Hamburg, 51 cks. Tyne S. S. Co.
Antimony—
Hamburg, 412 cs. Tyne S. S. Co.
Barytes—
Antwerp, 100 bgs. Tyne S. S. Co.
Colours—
Hamburg, 3 cks. Tyne S. S. Co.
Rotterdam, 5 brls. "
Dyestuffs *(otherwise undescribed)*
Antwerp, 490 bgs. Tyne S. S. Co.
Glue—
Hamburg, 8 cks. Tyne S. S. Co.
Paint—
Christiania, 2 cs. P. H. Matthiessen & Co.
Soap—
Rotterdam, 3 cs. Tyne S. S. Co.
Starch—
Antwerp, 106 cs. Tyne S. S. Co.
Rotterdam, 146 "
Wood Pulp—
Christiania, 1,157 bls. P. H. Matthiessen & Co.
Gothenburg, 10
Montreal, 11,592
Zinc Oxide—
Antwerp, 60 brls. Tyne S. S. Co.

GOOLE.

Week ending August 24th.

Acids—
Hamburg, 2 cks.
Alizarine—
Rotterdam, 46 cks. 1 cs.
Alkali—
Calais, 2 cks.
Antimony—
Boulogne, 3 cks.
Antimony Sulphide—
Boulogne, 8 cks.
Caoutchouc—
Boulogne, 9 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 16 cs.
Colours—
Hamburg, 20 cks. 2 cs.
Dyestuffs *(otherwise undescribed)*
Amsterdam, 1 ck.
Antwerp, 318 bgs.
Boulogne, 59 cks. 1 cs.
Rotterdam, 304 49
Farina—
Delfszyhl, 120 bgs.
Hamburg, 100
Glue—
Boulogne, 1 ck.
Rotterdam, 80 bgs.
Ochre—
Calais, 51 cks.
Phosphates—
Dunkirk, 1,600 bgs.
Potash—
Calais, 8 dms.
Dunkirk, 20
Saltpetre—
Rotterdam, 100 bgs.
Soap—
Hamburg, 1 cs.
Rotterdam, 3
Starch—
Ghent, 66 cs.
Waste Salt—
Hamburg, 125 cks.

GRIMSBY.

Week ending August 27th.

Alkali—
Hamburg, 6 cs.
Caoutchouc—
Antwerp, 1 cs.
Hamburg, 5
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Hamburg, 10 cks. 7 pks.
Rotterdam, 1 cs.
Colours—
Antwerp, 14 cks. 5 cs. 70 pks.
Hamburg, 16 8 35
Rotterdam, 3
Dyestuffs *(otherwise undescribed)*
Dieppe, 7 cks.
Farina—
Hamburg, 100 bgs.
Plumbago—
Hamburg, 1 ck.
Size—
Antwerp, 2 cks.
Starch—
Antwerp, 70 cs.
Wood Pulp—
Fredrikshald, 5,850 bls.
Helsingborg, 80

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

ek ending August 31st.

	5 kgs.		£17
ica,	4 cs.		13
on,	17 c.		£26
nia—			
own,	14 cs.		£36
p,	18 cylds.		122
nium Carbonate—			
stle,	1 t.		£28
nium Chloride—			
e,	14 c.		£13
nium Sulphate—			
e,	101 t. 8 c.		£966
n,	57		525
ad,	5		48
c—			
,	2 t. 15 c.		£53
gton,	13		235
u,	10		13
—			
n,	10 cs.		£22
,	10 c.		9
dam,	50 cks.		75
y,	1 t.		£15
ic Acid Gas—			
el Is.,	73 tubes		£27
York,	22 cs.		110
c Soda—			
ntle,	19 pks.		£30
r,	11 c.		25
n,	2 t. 3		19
lelphia,	67		400
cals *(otherwise undescribed)*			
ntle,	11 pks.		£12
urg,	70 cks. / 35 kgs.	34dms.	430
irk.	20		73
gton,	19 pks.	24 pks. (pt.)	79
urne,	16 / 12 cks	17	178
hai,	8 pks.		20
ne.	6kgs.	73 pks. (pt.)	161
ide,	2 cs.		11
holm,	10 cks.		15
els,	2		35
,	70 kgs.		407
hagen,	10 cks.		26
ne,	12 / 10 kgs.		91
tta,	3		10
rdam,	10		70
Town,	2 cks.		17
,	1		39
	1 pk.	39 pks. (pt.)	67
Acid—			
antle,	5 c.		£33
o,	3 cks.		19
ay,	4		28
mouth,	1		7
land,	10		61
ide,	5		33
tiania,	5		33
erdam,	10		55
rdam,	1		7
ane,	2		13
sville,	1		7
hampton,	1		7
Products—			
izarine			
n,	3 cks.		£45
iline			
land,	2 cs.		£27
a,		10 dms.	280
erdam,	10		270
thracene			
erdam,	55 cks.		£149
nzol			
ort,	60 cks.		£200
ogne,	106		251
burg,	48		91
rbolic Acid			
g Kong,		20 dms.	£8
ington,	20		8
,	24 cks.		177
orne,	20		20
gne,	49		249
adelphia,	5		39
reosote			
ington,		20 dms.	£25
York,	500 cks.		346
aphthaline			
in,	12 cks.		£46
tch			
hfeld,	125 t.		£173
werp,	620		745
York,	5 cks.	17 brls.	55
Stockholm,	100		40
Newport News,	560 bgs.		73
Montreal,	280 cks.		54
Halifax,	140		73
Tar			
Hamburg,	200 brls.		£86
Brisbane,		30 dms.	6
Durban	600		24
Demerara,	5		6
Newcastle,	7		12
St. Petersburg,	2,357	910 rnlts.	2,033
Tar Oil			
Melbourne,	15 cks.		£20
Coal Products *(otherwise undes.)*			—
Bombay,		1 pk.	£5
Boulogne,	1 ck.		18
Durban,	100 cs.	705 pks.	44
Copper Sulphate—			
Pt. Elizabeth,	8 c.		£8
Cream of Tartar—			
Melbourne,	1 t. 10 c.		£109
Fremantle,	15		58
Perth,	5		19
Greymouth,	5		20
Disinfectants—			
Jamaica,	11 pks.	20 dms.	£38
Singapore,	9		16
Bombay,	80 cks.		20
Cape Town,	120	100	148
Barbadoes,	1		7
Hamburg,	33		11
Brisbane,	10		60
Glycerine—			
New York,	31 t. 7 c.		£850
Manure—			
Cape Town,	160 t.		£720
Dunkirk,	141		930
Landerneau,	240		1,620
Memel,	780		2,015
Trinidad,	40		353
Channel Is.,	15		60
Genoa,	160		730
Durban,	135		1,800
Rochefort,	100		375
Martinique,	89	6 c.	850
Nitric Acid—			
Channel Is.,	63 carbys		£122
Oxalic Acid—			
Auckland	1 t.		£42
Newcastle,	1	10 c.	47
Phosphorus—			
Oporto,	6 cs.		£57
Potash—			
Auckland,		2 dms.	£14
New York,	3 c.		20
Brisbane,	3		10
Potassium Bichromate—			
Smyrna,	1 t. 5 c.		£43
Potassium Carbonate—			
Launceston,	5 c.		£63
Potassium Cyanide—			
Townsville,	50 cs.		£636
Shanghai,	10		50
Durban,	40		314
Fremantle,	4 t. 16 c.		467
Delagoa Bay,	53 cs.		542
Boston,	1, 16 c.		219
New York,	520 cs.		2,524
Sydney,	1		121
Potassium Prussiate—			
Genoa,	1 t.		£60
Montreal,	19 cks.		292
Salt Cake—			
Melbourne,	44 cks.		£63
Saltpetre—			
Townsville,	1 t.		£20
Jamaica,	1		21
Brisbane,	4 10 c.		87
Sydney,	3 2		63
Sheep Dip—			
Durban,	1,000 dms. 5 c. / 250 cs.		£519
Wellington,	100	275 dms.	738
Jamaica,	10		5
Fremantle,	50		88
Dunedin,	200		375
Nelson,	45		56
Punta Arenas,	8 t.		262
Timaru,	250		431
Invercargill,	200		375
Auckland,	200		375
New York,	14 cks.		20
Soap Lye—			
Rotterdam,	41 t.		£820
Soda—			
Adelaide,	4 t.		£24
Auckland,	16		60
Montreal,	11 c.		25
Rotterdam,	5 9		30
Cape Town	1 18		6
Rockhampton,	1		6
Townsville,	2		12
Sodium Bicarbonate—			
Fremantle,	1 t. 10 c.		£9
La Guayra,	1		7
Sodium Hyposulphite—			
Adelaide,	26 t 16 c.		£114
Sodium Silicate—			
Auckland,	2 t. 4 c.		£12
Sodium Tartrate—			
Oporto,	3 cks.		£10
Sulphur—			
Pt. Elizabeth,	1 t. 2 c.		£11
Sulphuric Acid—			
Durban,	35 pks.		£26
Hamburg,	15 cs.		12
Beira.	10		15
Superphosphates—			
Lyttelton,	20 t.		£60
Tartaric Acid—			
Pt. Elizabeth,	6 c.		£34
Fremantle,	2		12
Adelaide,	10		67
Riga,	7		45
Wellington,	3		23
Greymouth,	1		6
Townsville,	2		13

LIVERPOOL.

Week ending August 31st.

Alkali—				
Valencia,	51 t.	14 c.	2 q.	£227
Piræus,	10	3	2	41
Salonica,	3	3	2	13
Barranquilla,	11	7		60
Seville,	15	15	3	63
San Sebastian,	9	18	3	40
Boston,	1	2		13
Alum—				
B. Ayres,	1 t.			£8
Pimental,	1	14 c.	3 q.	9
Santos,	10	16	1	45
Constantinople,	1	3	1	6
Pernambuco,		19	3	5
Patras,	1	9	1	7
Quebec,	2	8	2	11
Tangiers,	1	7		6
Lisbon,	10	6		51
Calcutta,	14	7	3	73
Bahia,		10		3
Melbourne,	10	13	2	51
Rosario,	20	11	2	54
Alum Waste—				
Calcutta,	50 t.	8 c.	2 q.	£96
Melbourne,	6	16	1	18
Ammonia—				
B. Ayres,		2 c.		£6
Vera Cruz,		3		6
La Guayra,			2 dms.	6
Anhydrous Ammonia—				
Marseilles,		7 c.		£35
Ammonium Carbonate—				
Genoa	1 t.	7 c.		£34
Yokohama,	3	5		38
Odessa,	60 kgs.			70
Lisbon,		5		8
Ammonium Chloride—				
Bombay,	4 t.	10 c.		£140
Genoa		10	3 q.	16
Madras		14		25
Montreal,		6		10
Ammonium Sulphate—				
Havre,	10 t.	4 c.		£100
Nantes,	49	15		480
Venice,	40	3	2 q.	500
Valencia,	71	3		650
Barcelona,	50			450
Oporto,	10	10	1	100
St. Louis,	58			582
Barcelona,	10	2	3	101
Rouen,	39	15		407
Las Palmas,	30			309
Barbadoes,	75			768
Samarang,	179	11	2	599
Sourabaya,	51	8	2	452
Basic Slag—				
Venice.	584 t.			£1,285
Bleaching Powder—				
Baltimore,	55 cks.			
Bilbao,	29			
Bombay,		25 cs.		
Boston,	125			
Ceara,		4		
Genoa,	57			
Havana,	29			
Leghorn,	28			
Naples,		42 pks		
New York,	88			
Rotterdam,	32			
Rouen,	83			
San Sebastian,	28			
Toronto,	20			
Venice,	14			
Vera Cruz,	25			
Boracic Acid—				
Stockholm,	5 t.	10 c.		£88
Borax—				
Hamburg,	16 t.	1 c.		£230
Montreal,	13	7	1 q.	199
Carlskrona,	15	2	3	220
Stockholm,	5	1	2	74
Ghent,		19	3	14
Danzig,	10	15		151
Calcium Chloride—				
Sydney,	1 t.	2 c.		£28
M. Video,	3	9		8
Carbolic Acid—				
Hamburg,	3 t.	3 c.	2 q.	£201
Baltimore,	5	6		359
Caustic Soda—				
Alexandria,	124 dms.			
Amsterdam,	65			
Antwerp,	38			
Barcelona.		240 pks.		
Barranquilla,	189			
Bilbao,		72		
Bordeaux,	15			
Calcutta,	105			
Cartagena,		20		
Catania,	35			
Coquimbo,	10			
Corunna,		12 brls.		
Dunedin,	26			
E. London,	17			
Fairwater,	140			
Fiume,	14			
Galatz,	275			
Gefle,	10			
Genoa,	258			
Ghent,	9			
Hamburg,	36			
Hiogo,	200			
Ibrail	32			
Johannesburg,	20			
Konigsberg.	35			
La Guayra,	40			
Leghorn,	40			
Malaga,	35			
Marseilles,		20 cks.		
Messina,	80			
Monmouth	50			
Montreal,	50			
Nantes.	22			
Naples,	36			
New York,	2	300		
Paysandt,	51			
Penang,	10			
Pernambuco,	120			
Progresso,	25			
Riga,	35			
Rio de Janeiro,	32			
Rotterdam,		48 pks.		
Saltillo.	122			
San Sebastian,	45			
Santander,	50			
Sevilla,	100			
Seville,	150	52 cks.		
Sourabaya,	2			
Stettin,	29			
Sydney,	15			
Talcahuano,	36			
Tampico,	75			
Trieste,	55			
Valencia,	98			
Venice,	41			
Vera Cruz,	106	2		
Volo,	100			
Chemicals *(otherwise undescribed)*				
Danzig,		6 c.		£5
Philadelphia,	33 t.	4		886
Rotterdam,	3	17		53
Odessa,	4			104
Galatz,	2	12	2 q.	8
Havana,	7	2	2	22
China Clay—				
Bombay,	15 t.			
Pernambuco,	qty.			
Philadelphia,	750 cks.			
Vera Cruz,	50 bgs.			
Citric Acid—				
Bombay,		1 c.		£5
Coal Products—				
Aniline Oil				
Genoa,			10 dms.	

Aniline Salts
Boston, 30 cs.
Madras, 5 kgs.
Piræus, 15 cks.
Symrna, 8
Naphthaline
Montreal, 5 cs.
Pitch
Bilbao, 41 brls.
Ferrol 509
Galatz, 5
Malaga, 9
Tar
Calcutta, 5 dms.
Dixcove, 12 brls.

Copperas –
Smyrna, 3 t. 6 c. £7
Samarang, 12 2 3 q. 31

Copper Sulphate—
Penang, 11 c. £8
Calcutta, 10 t. 161
Ghent, 12 19 196
Genoa, 4 17 72
Batavia. 15 18 1 q. 255
Samarang, 5 17 3 95
Catania, 8 1 6
Danzig, 1 19 33
Konigsberg, 8 2 8
New Fairwater, 9 3 8
New York, 1 13 2 26

Disinfectants—
Sydney, 1 t. 1 c. £46
Natal, 5 10 2 q. 30
Calcutta, 1 2 3 41
Rangoon, 2 cks. 1 cs. 7

Dried Blood—
Teneriffe, 20 t. £140
Dunkirk, 25 10 c. 190
Alicante, 2 14

Dyestuffs—
Aniline Colours
New York, 2 kgs.
Annatto
Barcelona, 1 ck.
Extracts
Boston, 50 cks.
Rio de Janeiro, 10
Fustic
Rio de Janeiro, 1 cs.
Logwood
Alexandria, 50 bgs.
Eureka, 20 kgs.

Glycerine—
Rangoon, 9 c. 2 q. £25
Pernambuco, 2 6
Yokohama, 1 t. 60
Calcutta. 2 120
Alexandria, 7 3 14

Lead Carbonate—
La Guayra, 1 kg £5

Magnesia—
Paris, 5 cs.

Magnesium Chloride—
Genoa, 7 t. 10 c. £ 8

Magnesium Sulphate—
Alexandria, 60 kgs.
Vera Cruz, 10 brls.

Manure—
Teneriffe, 21 t. £164
La Pallice 293 3 c. 3 q. 1,132
New York, 2 10
Gd. Canary, 10 35

Oxalic Acid—
Philadelphia, 7 t. 5 c. £189

Paint—
Antwerp, 4 kgs.
Axim, 2
Barcelona, 3 dms.
B. Ayres, 8 cks. 1 kg.
Calcutta. 75
Cape Town, 40
Constantinople, 291 pks.
Fiume, 49 dms.
Gibratar. 15
Hamburg, 14 kgs. 39 pks.
Havana. 1 ck.
Kingston, 3
Lagos, 1 cs.
Limon, 5 cks.
Malta, 116
Manaos, 6 10 brls.
Melbourne, 5 kgs.
M. Video, 24 cks.
Nicaragua, 8
Panama, 1
Para, 10
Pernambuco, 90 kgs.
Puerto Plata, 2 cks.
St John's, 28 kgs. 1 ck.
St. Thomas, 11 cks.
Salora, 2
Sierra Leone, 217 dms.

Painters' Colours—
Bahia, 69 pks.
Boston, 35 kgs. 90 brls. 120 bgs.
Calcutta, 2 cks.
Callao, 70 cs.
New York, 1 ck. 1 bx.
Para, 20 kgs. 8 cs.
Pernambuco, 4 cks. 2
San Francisco, 10
San Juan, P.R., 3
Savanilla, 6
Varna, 13

Paraffin Wax—
Genoa, 16 pks.
Oporto, 1 cs.
Palermo, 10 bgs.
Para, 20
Rio de Janeiro, 6

Pearl Ash—
B. Ayres, 10 c. £16

Picric Acid—
New York, 1 t. 1 c. 3 q. £115

Potashes—
Havana, 8 c. £10

Potassium Bichromate—
Alexandretta, 5 t. 1 q. £163
Havana, 1 1 c. 36
Smyrna, 3 cks. 30
Syra, 7 1 15

Potassium Carbonate—
Valencia, 2 t. £35

Potassium Chlorate—
Gutujewski, 12 t. 10 c. £385
Hamburg, 7 10 225
Hiogo, 2 10 80
Philadelphia, 8 15 270
New York, 17 17 550

Potassium Silicate—
Amsterdam, 1 t. 4 c. 2 q. £15

Salt—
Amsterdam, 85 t.
Antwerp, 190
Baltimore, 350
Boston, 100
B. Ayres, 50
Calcutta, 6,438
Cameroons, 50 14 c.
Cape Town, 500
Chicago, 13
E. London, 40
Ghent, 80
Gd. Bassa. 25
Gd Bassam, 25
Harlingen, 480
Kingston, 20
Lisbon, 30
Melbourne, 50
N. Orleans, 119
New York, 40 1,301 sks.
Philadelphia, 800 bgs. 150
Rangoon. 25 t.
Rio G. do Sul, 40 cs.
Rotterdam, 150
Rouen, 100 bgs.
St. Petersburg, 330 t.
Sydney. 50
Toronto, 410
Vera Cruz, 200

Salt Cake—
Antwerp, 224 t. 3 c. £286
Baltimore, 50 81
Lisbon, 30 50

Saltpetre—
Para, 1 t. 10 c. £31
Pernambuco, 2 10 66

Sheep Dip—
Boca, 3 t. £86
Calcutta, 300 dms. 50
Curacao, 4 c. 6
Melbourne, 12 13 3 q. 125

Soap—
Accra, 50 bxs.
Alexandria, 72 cs.
Barbadoes, 275
Barcelona, 1
Batavia. 1,100
Bathurst, 272
Bayin, 250
Belize, 890
Berne, 130
Bluefields, 400
Bombay, 15
Brussels, 161
B. Ayres, 1
Bugun a, 100
Cairo, 20
Calcutta, 1,572
Cape Town, 381
Conakry, 202
Constantinople, 20
Demerara, 1,670
Dixcove, 100
Dominica, 20
E. London, 1,552
Genoa, 506
Gibraltar, 125
Gothenburg, 50 tcs.
Guayaquil, 50
Harbour Grace, 30
Hong Kong, 1,365
Hobart, 5 tnks
Karachi, 6
Lagos, 25
Launceston, 5
Las Palmas, 250
Madras, 4
Malta, 20
Manaos, 230
Mollendo, 2
New York, 61 1 ck.
Old Calabar, 936
Para, 100
Penang, 410
Petit Goave, 50
Piræus, 6
Pt. Natal, 5 bdls.
Porto Rico, 400
Principulca, 40
Rangoon, 15
Rotterdam, 170
St. John's, 1,195 24
St. Lucia, 275
St Thomas, 100
Samarang, 2
Salt Pond, 50
Sapeli 500
Savannah, 50
Singapore, 3,350
Sourabaya, 2
Surinam, 50
Teneriffe, 975
Tongku Wharf, 10 kgs.
Toronto. 501
Trinidad, 500 bxs.
Vera Cruz, 2
Warri, 500
Winnebah, 100
Winnipeg, 300
Yokohama, 2

Soap Lye—
Rotterdam, 80 dms.

Soda—
Catania, 30 brls.
Constantinople, 50 cks.
Gibraltar, 30
Havana, 2
Montreal, 150 kgs.

Soda Ash—
Adelaide, 220 cks.
Bahia, 15 kgs.
Baltimore, 19 tcs.
Barcelona, 30
Boston, 200 33 36
B. Ayres, 200
Calcutta. 49 brls. 8
Cape Town, 26
Chefoo, 50
Copenhagen, 1,188 bgs.
Fairwater, 320 bxs.
Galatz, 200 bgs.
Gefle, 20
Genoa. 1,250
Gothenburg, 113 22
Hiogo, 203
Messina. 20
Montreal, 79 pks.
New York, 36 cks.
Para, 107
Patras, 20
Paysandt. 23
Philadelphia, 90 tcs.
Rotterdam, 250 710 c. 15
Samarang, 15
San Francisco, 476
Seville, 30
Talcahuano, 10

Soda Crystals—
Alexandria, 51 brls. 20 cks.
Belize, 20 kgs.
Bourgas, 30
Brantford, { 25 bgs. / 75 kgs.
Cape Town, 10 40
M. Video, 200
Rosario, 200

Sodium Arseniate—
Lisbon, 2 cks

Sodium Bicarbonate—
Adelaide, { 50 bgs. / 117 kgs.
Alexandria, 30 brls.
Alicante, 140
Antwerp, 20 9
Barcelona, 30
Bombay. 140
Brantford, 100
Calcutta, 424
Cape Town, 48 pks.
Cartagena, Sp., 87
Catania, 28
Genoa, 202
Halifax, 40
Hiogo, 409
Kobe, 500
Leghorn, 32
Libau, 155
Lisbon, 56
Melbourne, 844
Montreal, 100 dms. 110
Newfairwater, 150 kgs.
Palermo, 4 cks.
Patras, 30
Pt. Natal, 10 bgs.
Rosario, 100 kgs.
Rotterdam, 20
Rouen, 402 39
Seville, 30 brls.
Syra, 4
Tampico, 50
Trinidad, 25
Valencia, 80 10

Sodium Carbonate—
Hamburg. 12 brls.

Sodium Chlorate—
Hamburg, 50 kgs. 4 cks.
Philadelphia, 150 pks.
Rotterdam, 20

Sodium Hyposulphite—
Brisbane, 50 kgs.
Salaverry, 2
Sydney, 70

Sodium Naphthionate—
Barcelona, 6 cks.

Sodium Sulphite—
Hamburg, 17 brls.
Montreal, 10

Starch—
St. John's, 10 cs.

Sulphur—
Boston, 125 t. 5 c. £337
Calcutta, 6 28
Gothenburg, 50 216
Montreal, 100 1 436
Newfairwater, 60 258
Sydney, 25 4 108

Superphosphates—
Gd. Canary, 5 t. £17
La Pallice, 715 6 c. 1,18[illegible]
Las Palmas, 12 4[illegible]
Morlaix, 105 2 1 q. 18[illegible]
Nantes. 257 13 36[illegible]
Teneriffe, 5 1[illegible]
Valencia, 200 1 4[illegible]

Varnish—
Leghorn, 1 cs.
Melbourne, 42 pks.
Pernambuco, 1
Piræus, 30 dms.
Rotterdam, 3

White Lead—
Accra, 40 kgs.
Rangoon, 600
Smyrna, 10 brls.

Zinc Chloride –
Bombay, 20 t. 4 c. £39

MANCHESTER

Week ending August 31st.

Alum—
Bussorah, 10 brls.

Anido Salts—
Switzerland, 15 cks.

Aniline Colours—
Germany, 10 kgs. 3 pks.

Antimony—
Helsingfors, 8 cks.

Caustic Soda –
Bahia, 50 dms.
Germany, 14

Chemicals *(otherwise unaescribed)*
Antwerp, { 25 kgs. / 5 cks.
Hamburg. { 4 kgs. / 3 cks.
Holland 2
Rotterdam, 5 cs.

Coal Products—
Aniline Oil
Belgium, 3 pks.
Naphthylamine
Switzerland, 14 cks.
Aniline Salts
Germany, 10 cks.
Pitch
Belgium, 101 t.
Tar Oil
Belgium, 10 cks.
Toluol
Basle, 11 dms.

ras—
d, 100 brls.
a Acid—
rland, 11 cks.
any, 13 cks.
nd, 7
anese Chloride—
nd, 1 ck.
al White—
m, 5 cks.
Acid—
re, 4 cks
rah, 2 cks.
rland, 1 cs.
rs' Colours—
ay, 2 kgs.
ium Bichromate—
re, 8 cks.
rah, 150 bxs.
m Naphthionate—
rland, 6 cks.
w—
nd, 13 cks.
c Acid—
any, 7 kgs.
Chloride—
nd, 1 ck.

HULL.

ek ending August 27th.

—
m, 4 dms.
100 pks.
onium Sulphate—
irk, 255 bgs.
a, 100
n, 198
m Carbonate—
York, 72 cks.
ic Soda—
183 dms.
icals *(otherwise undescribed)*
2 cks.
erdam, 45 200 pks.
tiania, 7 26 cs.
912 slbs.
nhagen, 10
theim, 10
a, 17 73
burg, 20 8
ngfors, 5 1
es, 20 3
York 55
erdam, 6 120
in, 2 71 pks.
, 20 104
urg, 5
nseed Oil—
erdam, 269 c.
erp, 780
nhagen, 170
theim, 41
burg, 755
ingen, 101
gsberg, 90
eilles, 193
en, 155
erdam, 618
kholm, 200
anger, 70
tuffs *(otherwise undes.)—*
erdam, 22 cks.
eilles, 50
'etersburg, 1
—
sund, 3 bgs.
theim 25
ed Oil—
andria, 20 c.
erdam, 100
erp, 71
tiania, 273
nhagen, 17
theim, 42
burg, 165
re—
nhagen, 100 t.
kirk, 4,095 sks.
;—
erdam, 1 cs.
theim, 1
a, 561 cks. 1
ters' Colours—
andria, 2 cks.
erdam, 1

Antwerp, 55 148 pks. 2 cs. 12 dms.
Bremen, 1
Christiania, 1 1
Christiansand, 132 pks.
Christiansund, 72 dms.
Copenhagen, 3 4
Drontheim, 2 1 75
Ghent, 30
Genoa, 10
Helsingfors, 200
Hamburg, 22 pks.
Marseilles, 9
New York, 39
Rouen, 8
Rotterdam, 11
St. Petersburg, 50
Stockholm, 2 45 dms.
Stavanger, 4
Uleaborg, 100
Wasa, 20

Pitch—
Ghent, 2 cks.
Helsingfors, 14 t.
Rouen, 95

Salt—
Calcutta, 630 t.

Soap—
Amsterdam, 175 cs.
Christiania, 1
Rotterdam, 155

Tar—
Aalesund. 2 cks.
Copenhagen, 35
Drontheim, 5 brls.
Genoa, 30
Hamburg, 16
Helsingfors, 50
Marseilles, 20
Rotterdam, 15
Uleaborg, 20

Varnish—
Amsterdam, 1 ck.
Antwerp, 2
Christiansund, 1 cs.
Drontheim, 2 3
Genoa, 9
Wasa, 15

Waste Salt—
Amsterdam, 200 brls.

GLASGOW.

Week ending September 1st.

Ammonium Carbonate—
Christiania, £53 10s.

Ammonium Sulphate—
Amsterdam, 111 t. 9 c.
Bombay, 22 4½
Colombo, 6 9½
Hamburg, 50 12
Nantes, 50 12¾
San Pedro, 122 9¾

Borax—
Antwerp, £72

Chemicals *(otherwise undescribed)*
Rotterdam, £31

Coal Products—
Benzol
Hamburg, 8 t. 5 c
Creosote Oil
Christiania, £36
France, 655
U.S.A., 264
Pitch
Bombay, £20
Canada, 50
Hamburg, 10 t. 4 c.
Tar
Bombay, £46
Calcutta, 100
Danzig, 214 t. 15 c.

Extracts—
Antwerp, £52 9s.
Canada, £80
New York, 273
U.S.A., 114

Gelatine—
Canada, £71
Philadelphia, 196

Glucose—
Christiania, 11 t. 5 c.

Iodine—
Rotterdam, £3 0

Lead Nitrate—
Montreal, £192

Linseed Oil—
Hamilton, 16 t. 10 c.
St. John's, N'fd., 2 11

Manganese Oxide—
New York, £120

Manganese (Recovered)—
Basle, £98

Painters' Colours—
Bombay, £236
Hamilton, 114
St. John's, N'fd., 60

Potassium Bichromate—
Antwerp, £407
Montreal, 190
Rotterdam, 74
U.S.A., 407

Potassium Cyanide—
Madras, £468

Soap—
Bombay, 2 t. 8¼ c.
Calcutta, 5 11
Montreal, 2 6

Sodium Bichromate—
Antwerp, 2 t. 16 c.
Nantes, 5 ½
U.S.A., 6 5¼

Sulphuric Acid—
Calcutta, £35
Rangoon, 322

Superphosphates—
Madras, 15 t.

Tallow—
Danzig, 4 t. 16 c.
Rotterdam, 5 5

TYNE.

Week ending August 27th.

Alkali—
Amsterdam, 112 t. 17 c.
Muhlgraben, 49 18
Riga, 10 18

Alumina Hydrate—
Antwerp, 4 t. 17 c.

Ammonium Carbonate—
Bergen, 2 c.
Hamburg, 1 t. 4

Ammonium Sulphate—
Rostock. 25 t.
San Francisco, 50

Antimony—
Gothenburg, 1 t.

Barium—
Naples, 13 t. 2 c.

Barium Carbonate—
Rouen, 1 t. 12 c.

Barytes—
New York, 26 t. 10 c.

Bleaching Powder—
Amsterdam, 3 t. 7 c.
Antwerp, 26 9
Drontheim, 20 1
Gothenburg, 60 6
Lammerfors, 5 14
Riga, 6 11
Rotterdam, 26 4
San Francisco, 4 12
Venice, 12 14

Bone Grease—
Genoa, 6 t. 4 c.
Naples, 2 1

Bones—
Rouen, 15 t. 12 c.

Borax—
Riga, 1 t. 3 c.

Castor Oil—
Rotterdam 4 c

Caustic Soda—
Abo, 71 t. 4 c.
Antwerp, 4 18
Genoa, 18 17
Gothenburg, 55 2
Helsingfors, 1 10
Naples, 10 10
New York, 125 11
Rotterdam, 1 16
San Lucar, 16 8
Venice, 29
Wiborg, 24 19

Fluor Spar—
Gothenburg, 50 t.
New York, 115 10 c.

Gypsum—
New York, 31 t. 12 c.

Litharge—
Riga, 2 t. 17 c.

Magnesia—
Antwerp, 1 c.
Genoa, 10
Hamburg, 1

Manure—
Genoa, 25 t.
Ortona, 1

Naphthaline—
Riga, 23 t. 7 c.

Paint—
Antwerp, 13 c.
Copenhagen, 2 t.
Hamburg, 6

Painters' Colours—
Rotterdam, 10 c.

Phosphorus—
San Lucar, 14 c.

Soda—
Amsterdam, 20 t. 4 c.

Soda Ash—
Bergen, 10 t.
Gothenburg, 50 1 c.
Helsingfors, 10 10

Sodium Hyposulphate—
San Francisco, 19 t.

Sodium Hyposulphite—
Rotterdam. 1 t. 8 c.

Sodium Silicate—
Gothenburg, 4 t. 8 c.
San Lucar, 10 1

Sodium Sulphate—
Antwerp, 30 t.
Copenhagen, 25
Venice, 1

Sulphur—
Gothenburg, 300 bgs.

Superphosphates—
Fredrikshaven, 680 t. 9 c.
Helsingborg, 1,033 14
Riga, 300
Rostock, 700 5
Veille, 750 1

Tallow—
Genoa, 3 t. 7 c.
Naples, 9 13

Turpentine—
Rotterdam, 1 tin

Varnish—
Bergen, 2 c.

White Lead—
Copenhagen, 1 t. 1 c.

Zinc Ashes—
Antwerp, 10 c.

GOOLE.

Week ending August 24th.

Chemicals *(otherwise undescribed)*
Amsterdam, 20 cks.
Boulogne, 10

Coal Products *(otherwise undes.)—*
Amsterdam, 67 cks.
Antwerp, 1
Boulogne, 65
Ghent, 3
Rotterdam, 7

Colours—
Boulogne, 21 cs. 3 pks.
Calais, 3
Ghent, 1 ck. 2 dms.
Rotterdam, 8

Manure—
Dunkirk, 637 bgs.
Hamburg, 100

Soap—
Ghent, 1 ck.

GRIMSBY.

Week ending August 27th.

Alkali—
Hamburg, 8 cks. 7 cs.
Malmo, 1

Chemicals *(otherwise undescribed)*
Antwerp, 13 pks.

Coal Products *(otherwise undes.)—*
Dieppe, 1 cs.
Hamburg, 18 cks.

Colours—
Antwerp, 1 kg. 2 cks. 3 cs.
Dieppe, 1
Hamburg, 1 1
Rotterdam, 3 4 dms. 1 brl.

Manure—
Esbjerg, 4,690 bgs.
Hamburg, 40

PRICES CURRENT.

WEDNESDAY, Sept. 7th, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % per cwt.	5/9	&	8/3
,, Glacial per cwt.		35/-	
Arsenic S.G., 2000° per lb.	1	4	0
Fluoric per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. per bottle	0	0	10
,, (Cylinder), 30° Tw. ,,	0	3	0
Nitric 80°Tw. per lb.	0	0	1½
Nitrous ,,	0	0	1½
Oxalic nett ,,	0	0	3
Phosphoric, 1750° ,,	0	0	11¾
Picric ,,	0	1	0
Sulphuric (fuming 50 %) per ton	15	10	0
,, (monohydrate) ,,	5	10	0
,, (Pyrites, 168°) ,,	3	0	0
,, ,, 150° ,,	1	5	0
,, (free from arsenic, 145°) ,,	1	7	6
Sulphurous (solution) S.G. 1025 ,,	3	0	0
Tannic (pure) per lb.	0	1	2½
Tartaric ,,	0	1	1
Arsenic, white powdered nett per ton	15	0	0
Alum (loose lump) ,,	4	7	6
Alumina Sulphate (pure) ,,	3	17	6
Aluminoferric ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % ne ,,	148	0	0
Ammonia, Anhydrous per lb.	0	1	2
,, ·880=28° B. ,,	0	0	2½
,, =24° B. ,,	0	0	1½
,, Carbonate nett ,,	0	0	3
,, Muriate per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd per cwt.	35/-	&	33/-
,, Nitrate per ton	31	0	0
,, Phosphate per lb.	0	0	4½
,, Sulphate (grey) London per ton	10	1	3
,, ,, (grey) Hull ,,	10	0	0
Aniline Oil (pure) per lb.	0	0	5¾
Aniline Salt ,,	0	0	4¾
Antimony per ton	37	0	0
,, (tartar emetic) per lb.	0	0	6¾
,, (golden sulphide) ,,	0	0	9
Barium Chloride per ton	6	17	6
,, Carbonate (native) ,,	3	15	0
,, Sulphate (native levigated) ,,	42/6 to 65/-		
Bleaching Powder, 35 % nett ,,	5	2	6
,, Liquor, 7 % ,,	3	10	0
Bisulphide of Carbon ,,	10	10	0
Chromium Acetate (crystal) per lb.	0	0	5½
Calcium Chloride per ton	2	7	6
China Clay (at Runcorn) in bulk ,,	15/- to 25/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % nett per lb.	0	0	6¾
Magenta ,,	0	3	9
Anthracene, 30 % A, f.o.b. London per unit per cwt.	0	0	4
Benzol, 90's per gallon	0	0	9½
,, 50/90 ,,	0	0	9½
Carbolic Acid (crude 60°) per gallon	0	1	11
,, (crystallised 40°) per lb.	0	0	7
,, (liquid 95/97% per gallon	0	0	11
Creosote (ordinary) ,,	0	0	2¾
,, (filtered for Lucigen light) ,,	0	0	4
Crude Naphtha 30 % @ 120° C. ,,	0	0	4½
Grease Oils, 22° Tw. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston ,,	1	0	0
Solvent Naphtha, 90 % at 160° per gallon	0	1	2
Copper per ton	52	1	3
,, Sulphate ,,	16	10	0
,, Oxide (copper scales) ,,	46	0	0
Glycerine (crude) 80 % ,,	29	0	0
,, (distilled S.G. 1250°) ,,	40	0	0
Iodine nett, per oz.	0	0	7½
Iron Sulphate (copperas) per ton	1	5	0
,, Sulphide (antimony slag) ,,	2	0	0
Lead (sheet) ,,	14	0	0
,, Litharge Flake (ex ship) ,,	16	10	0
,, Acetate (white ,,) ,,	26	0	0
,, ,, brown ,,) ,,	16	10	0
,, Carbonate (white lead) pure ,,	17	0	0
,, Nitrate ,,	20	0	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) per ton	5	2	6
,, ,, (grey) (ex ship ,,	7	2	6
Magnesium (ribbon and wire) per oz.	0	2	3
,, Chloride (ex ship) per ton	2	10	0
,, Carbonate per cwt.	1	17	6
,, Calcined Magnesia per ton.	9	10	0
,, Sulphate (Epsom Salts) per ton	2	12	6
Manganese, Sulphate ,,	17	0	0
,, Borate per cwt.	2	2	6
,, Ore, 70 % per ton	3	10	0
Methylated Spirit, 61° O.P. per gallon	0	2	1
Naphtha (Wood), Solvent ,,	0	2	9
,, ,, Miscible, 60° O.P ,,	0	4	0
Oils:—			
Cotton-seed per ton	16	0	0
Linseed ,,	18	0	0
Stearine ,,	25	0	0
Phosphorus (yellow) per lb.	0	1	11
,, (red) ,,	0	2	8
Potassium Bichromate nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) per ton	15	5	0
,, Chlorate per lb.	0	0	3½
,, Cyanide, 98% ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % per ton	22	15	0
,, ,, (Caustic Potash) 75/80 % ,,	18	0	0
,, Potash Hydrate Liquid 50 % ,,	11	0	0
,, Nitrate (refined) ,,	19	15	0
,, Permanganate per cwt.	3	2	6
,, Prussiate Yellow per lb.	0	0	6½
,, Sulphate, 90 % (ex ship per ton	9	15	0
,, Muriate, 80 % do.) ,,	8	15	0
Silver (metal) per oz.	0	2	3½
Sodium (metal) per lb	0	2	9
,, Carb. (refined Soda-ash) 48 % nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% ,, ,,	4	0	0
,, ,, (Alkali) 58 % (Bags) ,, ,,	4	2	6
,, ,, (Soda Crystals) ,, ,,	2	5	0
,, Acetate (ex-ship) ,,	11	15	0
,, Arseniate, 45 % ,,	12	0	0
,, Chlorate per lb.	0	0	3½
,, Borate (Borax) net, per ton.	12	10	0
,, Bichromate per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton (10 ton lots)	8	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	7	15	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	2	6
,, ,, (60 % Caustic Soda) ,, ,, ,,	6	2	6
,, ,, (pure liquor 90° Tw.) ,, ,, ,,	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate ,,	6	10	0
,, Hyposulphite ,,	5	5	0
,, Manganate, 25% ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool per cwt.	0	7	7½
,, Nitrite, 98 % per ton	25	0	0
,, Phosphate ,,	9	15	0
,, Prussiate per lb.	0	0	5½
,, Silicate (glass) per ton	4	10	0
,, ,, (liquid, 100° Tw.) ,,	3	7	6
,, Stannate, 40 % per cwt.	2	15	0
,, Sulphate (Salt-cake) per ton.	1	5	0
,, ,, (Glauber's Salts) ,,	1	7	6
,, Sulphide ,,	7	5	0
,, Sulphite ,,	4	15	0
Strontium Hydrate, 100% ,,	10	15	0
Sulphocyanide Ammonium, 95 % per lb.	0	0	5½
,, Barium, 95 % ,,	0	0	4
,, Potassium ,,	0	0	6½
Sulphur (Flowers) per ton.	7	7	6
(Roll Brimstone) ,,	6	3	9
,, Brimstone: Best Quality ,,	4	12	6
Superphosphate of Lime (26%) ,,	2	10	0
Tallow ,,	22	0	0
Tin Crystals per lb.	0	0	5½
,, English Ingots per ton	76	10	0
Zinc (Spelter) ,,	21	2	6
,, Chloride (solution, 100° Tw.) ,,	6	0	0
,, Sulphate, Crystal ,,	6	7	6

THE

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AND

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nications for the Editor, if intended for insertion in the ek's issue, should reach the office not later than **Tuesday** g.

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THE THIN END OF THE WEDGE.

SOME time back we chronicled in these columns the fact that an effort was being made by the Salford Corporation to stir up the local boroughs and authorities of Lancashire and Yorkshire, and marshal them for a united attack upon the ostrich-like policy of the Local Government Board in regard to the land treatment of sewage.

The requirements insisted upon before the Board will give their consent to any sewage scheme, have become notorious by their impracticability and autocracy. There is no need to enlarge upon the fatuous belief of the Board in their own antiquated notions, and their refusal to admit that all the principles of land filtration may be fulfilled without actually purchasing several hundred acres of land, for such vagaries are now common knowledge.

In the face of this position a second conference was held in Salford this week to make known the fact that the Salford Corporation have determined to avail themselves of the Public Health Act of 1875 as a means of raising money for their sewage scheme, and have thus set the Local Government Board at defiance.

The section which enables them to take this step has long been known to many Town Clerks, but, as far as we know, Salford is the first borough to take advantage of the powers granted in this particular section of the Public Health Act. It is one thing to know you can depart from time-honoured channels and defy precedents, but it is another thing to do so.

The Salford Town Clerk, however, *has* done so. In effect the section we refer to states that all authorities who have "land, works, or other property for the purposes of the disposal of sewage" have no need to go to the Local Government Board—that Board has nothing to do with the matter in any shape or form. Such authorities may borrow to the extent of two-thirds of the annual assessable value of their districts—an amount which should be quite equal to their requirements. On contesting the matter, the Local Government Board has admitted that the Town Clerk was right in this contention, and Mr. Fletcher Moulton, although he hesitated at first, has also accepted his view. The Bank of England, through their solicitors, have also looked into the matter, and are lending money to the Corporation in the full conviction that this view is correct.

Of course, the legality of this method is no longer questionable; but then there is the all-important consideration of expediency to be taken into account, and seeing that the Local Government Board have actually refused all other loans to certain authorities who have tried to argue the land filtration question with the Board, it is not surprising that no action has been taken under the Public Health Act—even Manchester hesitated and forebore.

The smaller authorities, however, may take heart, for the Salford Town Clerk goes even farther, and states that the

Board have no power to refuse to sanction loans for other purposes because certain local authorities have declined to carry out their wishes in regard to land filtration. Not only have they no power, but they can be compelled by mandamus to accord the sanction sought, other things being equal.

This is an important statement, and provided the cost of procuring the mandamus is not prohibitive, it is well that an association should be formed, capable of bringing pressure to bear on the Local Government Board by reminding that august body that however great their powers may be they have bounds, the over-stepping of which changes the position of the Board. By their own act they depose themselves as administrators, and issue their own indictment as culprits under the law.

It is a generally accepted fact that the present Sewage Commission will be made the instrument for pruning the sewage department of the Local Government Board, and in shaping a future policy it is as well to bear this in mind, but all the same it is as well that the members of the Conference decided to proceed with the formation of such an association. It is proposed that the association be formed of the local authorities within the Irwell watershed, and be composed of two representatives of each authority, to fully consider and report upon the following matters, namely:—(*a*) The requirements of the Local Government Board with respect to filtration of sewage effluent through land. (*b*) The rights of manufacturers to turn trade liquids and refuse into the public sewers. (*c*) The standard of purity of effluent required by the Mersey and Irwell Joint Committee. And that each authority be required to contribute towards the incidental expenses *pro rata* according to population.

Royal Commissions are very long-winded, and often vague in their final expressions of opinion, so that if this association is soon put in working order it may be able to help the Commission, and hasten the reformation of the Local Government Board.

Agricultural Notes.

BASIC SLAG AS A FERTILISER.

Basic slag is recognised as a valuable manure of the artificial class. It has been proved over and over again that it has been employed with great economy upon certain classes of soil, and particularly upon the London clay, where lime is deficient and where phosphoric acid proves a stimulant to the clover family. There have been many tests made from time to time with the object of ascertaining whether basic slag is a better phosphatic manure than superphospate and various forms of bone. Among the most recent tests are those by the eminent chemist Kuhn, who compared slag with superphosphate, degelatinised bone, and steamed bone in the growth of rye. The rye was sown in boxes 20 centimetres square and 25 centimetres deep. They were made of zinc, and were devised in order to secure proper aeration and watering. The slag contained 20 per cent. of phosphoric acid, and the superphospate 17 per cent.—omitting decimals—of which 14 per cent. was soluble; the steamed bone contained 22 per cent., with 4¾ per cent. of nitrogen; while the degelatinised bone contained 29⅝ per cent. of phosphoric acid and 1¼ per cent. of nitrogen, this element having been chiefly removed in the gelatine, of which the bone had been almost wholly deprived. The quantity of water added to the soil in which the seeds were grown never at any time exceeded 70 per cent. of its water-holding capacity. One lot of rye was grown without phosphoric acid addition. It gave the smallest yield, and that is taken at 100 both in grain and straw with the chaff. Superphospate, given at the rate of 44½ lb. per acre, produced a yield which is represented by 115. When the allowance was doubled the yield was increased to 145. Eighty-nine pounds of phosphoric acid in the degelatinised bone meal produced 164. The same quantity in steamed bone gave 158. Half this quantity gave 145, whereas double gave 176. Double this again, or 356 lb. of phosphoric acid per acre in the same medium, gave 177—a curious commentary on the increase of manure—while 89 lb. in the form of steamed bone meal gave the best results. When slag was used, however, at the rate of 89 lb. per acre, it gave 161, and when this quantity was doubled the yield was 179. This quantity also gave the greatest yield of straw, next to which came the degelatinised bone, the superphosphate, as in the case of the grain, yielding the smallest quantity. In every case the soil, which was of a poor, sandy character, was supplied with sulphate of ammonia at the rate of 7 lb. per acre, allowance being made for the nitrogen contained in the bones. Potash was also added at the rate of 89 lb., with lime as powdered chalk. The experimenter thinks that if his work is confirmed degelatinised bone may be largely used instead of basic slag on this class of soil, on account of the cheapness with which it can be obtained. It is curious that so much work still leaves the phosphoric acid question an open one. It is next to impossible for any expert to tell what will happen on the majority of soils, especially arable soils, not so much because work has not been done to obtain an opinion from nature, but because that work is isolated instead of being carried out on a general system in which every experimental station should work in unison. Those who employ artificials should remember that the weather may at any time prevent or vitiate results. Soils subject to drought may show no sign of heavy dressings applied in the month of March or April, and unless duplicates are arranged and a portion of the field manured is left unmanured it may be impossible to say whether the failure or success, as the case may be, is owing to the manure applied or to some extraneous cause.

A writer in the *Agricultural Gazette* appears to be so enamoured of basic slag that he is induced to ridicule farmyard manure, and he asks a question, to which he replies in his own way, as to what farmyard manure would be worth if the nitrogen, potash, and phosphates were extracted from it. There are, says Mr. James Long, and always will be, enthusiasts who base their opinions upon a casual study of a question. Just as there are, and have been in the past to a still larger extent, farmers who insist that nothing but "muck" is of any value to the soil, so are there amateurs who dare to insist that they can buy the pith and marrow of fertility at the chemist's shop, and that farmyard manure is consequently of no value. The writer in question is an example of this class. He supposes that a practical farmer wishes to grow twenty tons of turnips of high quality on a single acre, and he asks whether it would be judicious on his part to spend one hundred shillings for farmyard manure when he could produce the crop for ten shillings by the aid of artificials. It is remarked incidentally that when Professor Wright, of the Glasgow College, can produce farmyard manure for nothing, he may then attempt to compete with basic slag, nitrogen, and potash as farm manures. The writer referred to concludes by showing that by spending 30 shillings an acre in the purchase of basic slag three tons more turnips can be produced, six bushels more grain, and pasture of at least three times the value of that obtained by the aid of 15 tons of dung. No doubt the editor of the *Gazette* saw his way to the conveyance of an excellent lesson by the publication of these remarks. I turn to the current number of the *Farmer*, and find the same subject discussed by the same writer. There is, therefore, a real danger that the ecstatic statements of an enthusiast may mislead the average reader, who is told that if half a ton of the best basic slag is applied in November to poor, old pasture, the land can be "worked"—presumably grazed—for from five to ten years, when 7 cwt. per annum should be applied again. Slag is, in fact, declared to be the ideal manure for all-round crops. I should be sorry to depreciate the value of slag in any degree, but there is no all-round manure if we except farmyard dung, while, as regards artificials, no one should spend money in their purchase without knowing what he is about. At first it is necessary to understand the physical character and the condition of the soil as regards fertility, to what manures the soil responds, and what manures are required for each particular crop. Those who study these points may purchase artificials with great economy. Those who take advice such as that to which I have referred will in nine cases out of ten throw their money away. It should never be forgotten that dung has a double value, and that the more carefully it is managed and preserved the more valuable it is. There are soils, especially those of the heavier clays, which often respond to slag, and which absolutely require physical help altogether apart from fertilising help. If they were crammed with nitrogen compounds, phosphoric acid, and potash, they would not prove profitable to the grower if their mechanical condition were not sufficiently good. To obtain condition something is required which will make them friable, which will allow of the admission of air and water. The mixture of abundant vegetable matter, such as fresh dung, with plastic clay will gradually convert it into a loam, which of all soils is the most perfect, especially as regards its physical condition; but without such mechanical help the clay would be as impervious to air as to water, except in so far as it would be helped by the winter frosts, having been laid up by the plough. But once sown and again laid down it rapidly reverts to its old condition, and it is precisely the modification of that condition which makes farmyard manure so valuable to this particulur form of soil as to all heavy soils, and, from another point of view, to all light soils.

The Patent List.

list is compiled from Official sources in the Manchester al Laboratory, under the immediate supervision of E. Davis and Alfred R. Davis, who report professionally e value of Chemical Patents.

PLICATIONS FOR ENGLISH LETTERS PATENT.

cture of Cement. J. Steiger. 18,483. August 29.

us for the Electrolytic Production of Alkali W. Thomson Kelvin). 18,522. August 30.

g Sodium and Potassium, and Anhydrou Oxides, Cyanides, of these Metals. G. Wolfram. 18,601. August 30.

the Residuum from Fish Offal. T. Watts. 18,651. August 31.

ic Cement. J. Steiger. 18,654. August 31.

on of and Decolorisation of Fats, etc. J. C. E. Bataille. 13,694. st 31.

ng Fine Basic Slag from Rough. G. Hoyermann, A. Harris, and aig. 18,714. September 1st.

ytic Extraction of Chromium. J. F. L. Moeller and E. A. G. Street. . September 1.

Generators and Holders. W. Riley and A. Kershaw. 18,768. mber 2.

Boiler Disincrustants. T. H. Cobley. 18,879. September 3.

TRACTS OF LATEST COMPLETE SPECIFICATIONS.

abstracts are specially prepared for the Chemical Trade Journal, . RIGHTS *of publication are* RESERVED. *This is the earliest abstracts of Chemical and allied patents accessible to the public.*

ments in or Relating to Machinery or Apparatus for Treating, ening, and Purifying Water, Sewage, Slimes, or other Liquids Matters held in Solution or Suspension. W. H. L. Galloway, nesburg (communicated by J. E. Jordan, Johannesburg). Eng. Pat. Oct. 12, 1897.

reatment tank is divided into compartments containing an cone, surmounted by a funnel, with the contracted end upper- hich serves as an air pipe. The cones check the flow of the hrough the tanks, and so facilitates settlement and the collec- the sludge, the liquid from the top of the first compartment onducted to the inside of the cone in the next tank. Any l or other precipitant is mixed with the liquid under treatment e which conveys it to the first tank. There are four figures, the details of the apparatus, which is essentially mechanical.

us for Drying. S. S. Bromhead, 171, Queen Victoria-street, London. nunicated by Messrs. Moeller and Pfeifer, 19, Friedrich Wilhelmstrasse,). Eng. Pat. 13,618. June 18, 1898.

invention aims at drying materials with the steam which they themselves during the drying process. The advantages are set great length, but the way in which the desired end is achieved ite so convincing. A slanting and rotating cylinder heated by e receives the material. The steam given off is passed through heater and back again over the material to be dried, the heat l in the superheater being lost in drying the material. The passed to a second cylinder, where the drying is completed by it of hot air, heated by a portion of the superheated steam. one diagram of the plant.

ments in the Manufacture of Ink. H. H. Lake, 45, Southampton ings, London (communicated by A. H. Spencer, 3 4, Lamartine-street, n, Mass., U.S.A.) Eng. Pat. 21,830. September 23, 1897.

ler to avoid the trouble which often attends the solution of ink , and the inconveniences of the sediment which is left, it is l to add an effervescent mixture which will thoroughly diffuse substance through the solution. A suitable formula for 12 is as follows:—Aniline, 60 grains; bicarbonate of soda, s; tartaric acid, 16 grains; gum arabic, 12 grains. The whole l, divided, and pressed into tablets. When dissolved in water ntity is specified) the tablets effervesce and form an ink free iment and of uniform quality.

ments in the Manufacture and Treatment of Coke. L. Dufrasne, inets, near Nant, Aveyron, France. Eng. Pat. 21,747. September 22,

ler to prevent the emission of sulphur dioxide during the ld combustion of coke, from ½ to 4 per cent. of sodium e is mixed with it. This may be done by adding the solid e to the coal before coking, or quenching the coke with a weak of the carbonate. Instead of soda, carbonate of potash, or e of lime mixed with salt, may be used.

SALT SHIPMENTS FROM THE MERSEY.

SHIPMENTS during August, although far from satisfactory, were nevertheless somewhat better than in the corresponding month of 1897, thanks to the heavy fishing off the Scotch coast. The August shipments, generally speaking, show increases of small quantities, the only exception being those to the United States, where there was an increase of 1,200 tons. The other increases were in the shipments to British North America, West Indies, Africa, Australasia, and to United Kingdom ports (Scotland being chiefly responsible for the increase here). Decreases are noted to Central and South America, Asia (3,300 tons), and European ports. The previous shipments this year are on the whole much the same as last year, but United States shipments decreased from 63,634 tons to 48,986 tons. British North America, Central and South America, and the United Kingdom (decrease 12,000 tons) also show a falling off, but increases are reported to the West Indies, Africa (7,600 tons), Asia (15,400 tons), Australasia, and Europe. The total exports from the Mersey for August were 49,072 tons, compared with 45,108 tons in August of last year. These figures include 36,663 tons (compared with 37,522 tons last year) from Liverpool, and 12,409 tons (compared with 7,586 tons last year) from Runcorn and Weston. The total previous shipments this year were 376,417 tons, against 379,801 tons in the same period of last year. This includes 299,180 tons from Liverpool (against 293,729 tons for the same period of last year), and 77,237 tons (against 86,072 tons) from Runcorn and Weston.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for July, 1898, as compared with July, 1897:—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	26,339	20,175	6,634	5,529
Sweden and Norway	7,867	10,090	1,848	2,321
Germany	15,758	14,401	3,806	3,679
Holland	6,351	12,748	1,316	2,677
France	6,182	4,693	2,068	1,791
Spain and Canaries	25,750	16,819	7,934	5,745
Italy	19,495	18,665	5,924	5,773
United States	93,930	60,551	25,535	11,368
Australasia	35,016	19,216	10,105	6,087
British North America	8,411	13,303	2,289	3,587
Other countries	126,892	91,739	37,050	26,552
Total	371,991	282,400	104,509	75,109

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	48,579	61,027	16,114	16,291
Other countries	32,889	30,219	10,899	9,044
Total	81,468	91,246	27,013	25,335

PURITY OF MANCHESTER WATER.—At the monthly meeting of the Swinton and Pendlebury Urban District Council, in the Council Chamber, Swinton Old Hall, on Monday, Mr. Ralph Williams presiding, Councillor S. Gerrard called attention to the impure water at present being supplied in the locality by the Manchester Corporation. He had had to run bucketfuls away in his own house for many mornings together before it ran clear enough to use. The water was muddy and contained ochre. Councillor Thomas Bold, millowner, said he had recently been shown some yarn at his mill which had been put to wash in town's water, and when it was taken out it was dirtier than when it went in. Complaints made by his sons to the Corporation had been unavailing. Local industry was being hampered by the impure water supply. The Manchester Corporation posed as benefactors in reducing their water rentals, but the neighbouring town of Bolton supplied as much water for 9d. as the Manchester Corporation did for 2s. Public attention wanted to be called to the matter, and a demand made that the Corporation should supply water at a reasonable rate and in such a condition as not to interfere with the trade of the district or the health of the people. It was unanimously resolved to send a strong letter of complaint to the Waterworks Committee of the Manchester Corporation on the matter.

BRITISH ASSOCIATION.

THE PRESIDENT'S ADDRESS.

In spite of the disconcerting destruction of the Colston Hall, the 1898 meeting of the British Association at Bristol has proved a great success. The address of the president, Sir William Crookes, covered such a wide field that this year we have been compelled to confine our attention to the more strictly chemical portions. After referring to the loss the world of science and physics had suffered by the death of Lord Playfair, the president proceeded to review the statistical position of the world in regard to food supply. The drift of this survey was to the effect that despite the producing powers of Russia, America, and Canada, our wheat-producing soils were fast on the way to depletion, which indirectly spells starvation to many of the inhabitants of this world, and Britain in particular. In indicating how such a lamentable condition of things might be averted, the president said:—

I have said that starvation may be averted through the laboratory. Before we are in the grip of actual dearth the chemist will step in and postpone the day of famine to so distant a period that we, and our sons and grandsons, may legitimately live without undue solicitude for the future. It is now recognised that all crops require what is called a "dominant" manure. Some need nitrogen, some potash, others phosphates. Wheat pre-eminently demands nitrogen, fixed in the form of ammonia or nitric acid. All other necessary constituents exist in the soil; but nitrogen is mainly of atmospheric origin, and is rendered "fixed" by a slow and precarious process which requires a combination of rare meteorological and geographical conditions to enable it to advance at a sufficiently rapid rate to become of commercial importance. There are several sources of available nitrogen. The distillation of coal in the process of gas-making yields a certain amount of its nitrogen in the form of ammonia; and this product, as sulphate of ammonia, is a substance of considerable commercial value to gas companies. But the quantity produced is comparatively small; all Europe does not yield more than 400,000 annual tons, and, in view of the unlimited nitrogen required to substantially increase the world's wheat crop, this slight amount of coal ammonia is not of much significance. For a long time guano has been one of the most important sources of nitrogenous manures, but guano deposits are so near exhaustion that they may be dismissed from consideration. Much has been said of late years, and many hopes raised by the discovery of Hellriegel and Wilfarth, that leguminous plants bear on their roots nodosities abounding in bacteria endowed with the property of fixing atmospheric nitrogen; and it is proposed that the necessary amount of nitrogen demanded by grain crops should be supplied to the soil by cropping it with clover and ploughing in the plant when its nitrogen assimilisation is complete. But our present knowledge leads to the conclusion that the much more frequent growth of clover on the same land, even with successful microbe-seeding and proper mineral supplies, would be attended with uncertainty and difficulties. The land soon becomes what is called "clover sick" and turns barren. There is still another and invaluable source of fixed nitrogen. I mean the treasure locked up in the sewage and drainage of our towns. Individually the amount so lost is trifling, but multiply the loss by the number of inhabitants, and we have the startling fact that in the United Kingdom we are content to hurry down our drains and water courses, into the sea, fixed nitrogen to the value of no less than £16,000,000. per annum. This unspeakable waste continues, and no effective and universal method is yet contrived of converting sewage into corn. Of this barbaric waste of manurial constituents Liebig, nearly half a century ago, wrote in these prophetic words:—"Nothing will more certainly consummate the ruin of England than a scarcity of fertilisers—it means a scarcity of food. It is impossible that such a sinful violation of the divine laws of Nature should for ever remain unpunished; and the time will probably come for England sooner than for any other country, when, with all her wealth in gold, iron, and coal, she will be unable to buy one-thousandth part of the food which she has, during hundreds of years, thrown recklessly away." The more widely this wasteful system is extended, recklessly returning to the sea what we have taken from the land, the more surely and quickly will the finite stocks of nitrogen locked up in the soils of the world become exhausted. The store of nitrogen in the atmosphere is practically unlimited, but it is fixed and rendered assimilable by plants only by cosmic processes of extreme slowness. The nitrogen which with a light heart we liberate in a battleship broadside has taken millions of minute organisms patiently working for centuries to win from the atmosphere. The only available compound containing sufficient fixed nitrogen to be used on a world-wide scale as a nitrogenous manure is nitrate of soda, or Chile saltpetre. This substance occurs over a narrow band of the plain of Tumarugal, in the northern provinces of Chile between the Andes and the coast hills. In this rainless district for countless ages the continuous fixation of atmospheric nitrogen by the soil, its conversion into nitrate by the slow transformation of billions of nitrifying organisms, its combination with soda, and the crystallisation of the nitrate have been steadily proceeding, until the nitrate fields of Chile have become of vast commercial importance, and promise to be of inestimably greater value in the future. The growing exports of nitrate from Chile at present amount to about 1,200,000 tons. The present acreage devoted to the world's growth of wheat is about 163,000,000 acres. At the average of 12·7 bushels per acre this gives 2,070,000,000 bushels. But 30 years hence the demand will be 3,260,000,000 bushels, and there will be difficulty in finding the necessary acreage on which to grow the additional amount required. By increasing the present yield per acre from 12·7 to 20 bushels we should with our present acreage secure a crop of the requisite amount. Now from 12·7 to 20 bushels per acre is a moderate increase of productiveness, and there is no doubt that a dressing with nitrate of soda will give this increase and more. The action of nitrate of soda in improving the yield of wheat has been studied practically by Sir John Lawes and Sir Henry Gilbert on their experimental field at Rothamstead. This field was sown with wheat for 13 consecutive years without manure, and yielded an average of 11·9 bushels to the acre. For the next 13 years it was sown with wheat, and dressed with 5 cwt. of nitrate of soda per acre, other mineral constituents also being present. The average yield for these years was 36·4 bushels per acre—an increase of 24·5 bushels. In other words, 22·86 lbs. of nitrate of soda produced an increase of 1 bushel of wheat. At this rate, to increase the world's crop of wheat by 7·3 bushels, about 1½ cwt. of nitrate of soda must annually be applied to each acre. The amount required to raise the world's crop on 163,000,000 acres from the present supply of 2,070,000,000 bushels to the required 3,260,000,000 bushels will be 12 million tons distributed in varying amounts over the wheat-growing countries of the world. It is difficult to get trustworthy estimates of the amount of nitrate surviving in the nitre beds. Common rumour declares the supply to be inexhaustible, but cautious local authorities state that at the present rate of export, of over one million tons per annum, the raw material "caliche," containing from 25 to 50 per cent. nitrate, will be exhausted in from 20 to 30 years. Dr. Newton, who has spent years on the nitrate fields, tells me there is a lower class material, containing a small proportion of nitrate, which cannot at present be used, but which may ultimately be manufactured at a profit. Apart from a few of the more scientific manufacturers, no one is sanguine enough to think this debatable material will ever be worth working. If we assume a liberal estimate for nitrate obtained from the lower grade deposit, and say that it will equal in quantity that from the richer quality, the supply may last, possibly, fifty years, at the rate of a million tons a year; but at the rate required to augment the world's supply of wheat to the point demanded 30 years hence, it will not last more than four years. For years past we have been spending fixed nitrogen at a culpably extravagant rate, heedless of the fact that it is fixed with extreme slowness and difficulty, while its liberation in the free state takes place always with rapidity and sometimes with explosive violence. There is a gleam of light amid this darkness of despondency. In its free state nitrogen is one of the most abundant and pervading bodies on the face of the earth. Every square yard of the earth's surface has nitrogen gas pressing down on it to the extent of about seven tons—but this is in the free state, and wheat demands it fixed. To convey this idea in an object lesson, I may tell you that, previous to its destruction by fire, Colston Hall, measuring 146ft. by 80ft. by 70ft., contained 27 tons weight of nitrogen in its atmosphere; it also contained one-third of a ton of argon. In the free gaseous state this nitrogen is worthless; combined in the form of nitrate of soda it would be worth about £2,000. For years past attempts have been made to effect the fixation of atmospheric nitrogen, and some of the processes have met with sufficient partial success to warrant experimentalists in pushing their trials still further; but I think I am right in saying that no process has yet been brought to the notice of scientific or commercial men which can be considered successful either as regards cost or yield of product.

FIXATION OF ATMOSPHERIC NITROGEN.

The fixation of atmospheric nitrogen therefore is one of the great discoveries awaiting the ingenuity of chemists. The fixation of nitrogen is vital to the progress of civilised humanity. Other discoveries minister to our increased intellectual comfort, luxury, or convenience; they serve to make life easier, to hasten the acquisition of wealth, or to save time, health, or worry. The fixation of nitrogen is a question of the not far distant future. Let me see if it is not possible even now to solve the momentous problem. As far back as 1892 I exhibited, at one of the *soirées* of the Royal Society, an experiment on "The Flame of Burning Nitrogen." I showed that nitrogen is a combustible gas, and the reason why when once ignited the flame does not spread through the atmosphere and deluge the world in a sea of nitric acid is that its igniting point is higher than the temperature of its flame—not, therefore, hot enough to set fire to the adjacent mixture. But by passing a strong induction current between terminals the air takes fire and continues to burn with a powerful flame, producing nitrous and nitric acids. This inconsiderable experiment may not unlikely

the development of a mighty industry, destined to solve at food problem. With the object of burning out nitrogen so as to leave argon behind, Lord Rayleigh fitted up apparatus forming the operation on a larger scale, and succeeded in effecting union of 29·4 grammes of mixed nitrogen and oxygen at an iture of one horse-power. Following these figures it would one Board of Trade unit to form 74 grammes of nitrate of soda, refore 14,000 units to form one ton. To generate electricity in inary way with steam engines and dynamos, it is now possible steady load night and day, and engines working at *maximum* cy, to produce current at a cost of one-third of a penny per Board e unit. At this rate one ton of nitrate of soda would cost £26. ctricity from coal and steam engines is too costly for large al purposes; at Niagara, where water-power is used, electricity sold at a profit for one-seventeenth of a penny per Board of unit. At this rate nitrate of soda would cost not more than ton. But nitrate of soda is limited in quantity, and will soon usted. Human ingenuity can contend even with these apparently s difficulties. Nitrate can be produced artificially by the com- of the atmosphere. Here we come to finality in one direction; es are inexhaustible. But how about electricity? Can we e enough energy to produce 12,000,000 tons of nitrate of soda y? A preliminary calculation shows that there need be no fear score; Niagara alone is capable of supplying the required energy without much lessening its mighty flow. The future e care of itself. The artificial production of nitrate is clearly iew, and by its aid the land devoted to wheat can be brought e 30 bushels per acre standard. In days to come, when the may again overtake supply, we may safely leave our successors ple with the stupendous food problem. And in the next on, instead of trusting mainly to foodstuffs which flourish in te climates, we probably shall trust more and more to the nt foodstuffs of the tropics, where, instead of one yearly sober jeopardised by any shrinkage of the scanty days of summer , or of the few steady inches of rainfall, Nature annually sup- at and water enough to ripen two or three successive crops of ls in extraordinary abundance. To mention one plant alone, ldt—from what precise statistics I know not—computed that, acre, the food productiveness of the banana is 133 times that of the unripe banana, before its starch is converted into sugar, is make excellent bread. Considerations like these must, in the termine the range and avenues of commerce, perhaps the fate of ats. We must develop and guide Nature's latent energies, we ilise her inmost workshops, we must call into commercial e Central Africa and Brazil to redress the balance of Odessa cago.

LOW TEMPERATURE RESEARCHES.

less Telegraphy and the Rontgen Rays next received the n of the President, thus forming a fitting introduction to the nt's own researches, in regard to which he said:—Whilst placing you the labours and achievements of my comrades in science, I is chance of telling you of engrossing work of my own on the ation of yttria to which for the last eighteen years I have given s attention. In 1883, under the title of "Radiant Matter scopy," I described a new series of spectra produced by passing sphorescent glow of yttria, under molecular bombardment *in* hrough a train of prisms. The visible spectra in time gave up crets, and were duly embalmed in the "Philosophical Transac- At the Birmingham meeting of the British Association in 1886 ht the subject before the Chemical Section, of which I had the to be president. The results led to many speculations on the e origin of all the elementary bodies—speculations that for the I must waive in favour of experimental facts. There still d for spectroscopic examination a long tempting stretch of n ultra-violet light, of which the exploration gave me no rest. ill not now enter into details of the quest of unknown lines. uartz prisms, lenses, and condensers, specially sensitized photo- films capable of dealing with the necessary small amount of n given by feebly phosphorescing substances, and above all patience in collating and interpreting results, have all played rt. Although the research is incomplete I am able to announce ong the groups of rare earths giving phosphorescent spectra in le region there are others giving well-defined groups of bands an only be recorded photographically. I have detected and no less than six such groups extending to λ 3,060. Without g on difficulties, I will give a brief outline of the investigation. with a large quantity of a group of the rare earths in a f considerable purity, a particular method of fractionation ed, splitting the earths into a series of fractions differing but from each other. Each of these fractions, phosphorescing *in* s arranged in the spectrograph, and a record of its spectrum aphed upon a specially-prepared sensitive film. In this way, fferent groups of rare earths, the several invisible bands were recorded—some moderately strong, others exceedingly faint. Selecting a portion giving a definite set of bands, new methods of fractionation were applied, constantly photographing and measuring the spectrum of each fraction. Sometimes many weeks of hard experiment failed to produce any separation, and then a new method of splitting up was devised and applied. By unremitting work—the solvent of most difficulties—eventually it was possible to split up the series of bands into various groups. Then, taking a group which seemed to offer possibilities of reasonably quick result, one method after another of chemical attack was adopted, with the ultimate result of freeing the group from its accompanying fellows and increasing its intensity and detail. As I have said, my researches are far from complete, but about one of the bodies I may speak definitely. High up in the ultra-violet, like a faint nebula in the distant heavens, a group of lines was detected, at first feeble, and only remarkable on account of their isolation. On further purification these lines grew stronger. Their great refrangibility cut them off from other groups. Special processes were employed to isolate the earth, and using these lines as a test, and appealing at every step to the spectograph, it was pleasant to see how each week the group stood out stronger and stronger, while the other lines of yttrium, samarium, ytterbium, &c., became fainter, and at last practically vanishing, left the sought-for group strong and solitary. Finally, within the last few weeks, hopefulness has emerged into certainty, and I have absolute evidence that another member of the rare-earth groups has been added to the list. Simultaneously with the chemical and spectrographic attack, atomic weight determinations were constantly performed. As the group of lines which betrayed its existence stand alone, almost at the extreme end of the ultra-violet spectrum, I propose to name the newest of the elements Monium, from the Greek *μόνος*, alone. Although caught by the searching rays of the spectrum, Monium offers a direct contrast to the recently-discovered gaseous elements, by having a strongly-marked individuality; but, although so young and wilful, it is willing to enter into any number of chemical alliances. Until my material is in a greater state of purity I hesitate to commit myself to figures; but I may say that the wave-lengths of the principal lines are 3,120 and 3,117. Other fainter lines are at 3,219, 3,064, and 3,060. The atomic weight of the element, based on the assumption of R_2O_3, is not far from 118—greater than that accepted for yttrium and less than that for lanthanum. I ought almost to apologise for adding to the already too long list of elements of the rare earth class—the asteroids of the terrestrial family. But as the host of celestial asteroids, unimportant individually, become of high interest when once the idea is grasped that they may be incompletely coagulated remains of the original nebula, so do these elusive and insignificant rare elements rise to supreme importance when we regard them in the light of component parts of a dominant element, frozen in embryo, and arrested in the act of coalescing from the original protyle into one of the ordinary and law-abiding family for whom Newlands and Mendeleeff have prepared pigeon-holes. The new element has another claim to notice. Not only is it new in itself, but to discover it a new tool had to be forged for spectroscopic research. Further details I will reserve for that tribunal before whom every aspirant for a place in the elemental hierarchy has to substantiate his claim.

The rest of the address was devoted to an interesting consideration of the possibilities of psychical research.

SECTION B. CHEMISTRY.

The attendance at this section was numerous and representative; the morning was occupied in the reading of the presidential address by the president of the section, Professor F. R. Japp, F.R.S., on Stereochemistry and Vitalism.

In the course of his address, the President said:—

Of the numerous weighty discoveries which science owes to the genius of Pasteur, none appeals more strongly to chemists than that with which he opened his career as an investigator—the establishing of the connection between optical activity and molecular asymmetry in organic compounds—the capital achievement of organic chemistry. Physiologists, on the other hand, are naturally more attracted by Pasteur's subsequent work, in which the biological element predominates. And yet his earlier work ought to be of interest to physiologists, not merely because it is the root from which the later work springs, but because it furnishes, I am convinced, a reply to the most fundamental question that physiology can propose to itself—namely, whether the phenomena of life are wholly explicable in terms of chemistry and physics; in other words, whether they are reducible to problems of the kinetics of atoms, or whether, on the contrary, there are certain residual phenomena, inexplicable by such means, pointing to the existence of a directive force which enters upon the scene with life itself, and which, whilst in no way violating the laws of the kinetics of atoms—whilst, indeed, acting through these laws—determines the course of their operation within the living organism. The latter view is known as vitalism. At one time universally held, although in a cruder form than that just stated, it fell, later on, into

disrepute; but recent years have witnessed a significant revival of the doctrine among the physiologists of the younger generation. It is not my intention to offer any opinion on the various arguments which physiologists of the neo-vitalistic school have put forward in support of their views. I shall confine myself to a single class of chemical facts rendered accessible by Pasteur's researches on optically active compounds, and, considering these facts in the light of our present views regarding the constitution of organic compounds, I shall endeavour to show that living matter is constantly performing a certain geometrical feat which dead matter, unless indeed it happens to belong to a particular class of products of the living organism and to be thus ultimately referable to living matter, is incapable—not even conceivably capable—of performing.

OPTICAL ACTIVITY OF ORGANIC COMPOUNDS.

Substances are said to be optically active when they produce rotation of the plane of polarisation of a ray of polarised light which passes through them. The rotation may be either to the right or to the left, according to the nature of the substance; in the former case the substance is said to be dextro-rotary; in the latter, lævo-rotatory. The effect is as if the ray had been forced through a twisted medium—a medium with a right-handed or a left-handed twist—and had itself received a twist in the process. Optically active substances may be divided into two classes. Some, like quartz, sodium chlorate, and benzil, produce rotation only when in the crystallised state; the dissolved (or fused) substances are inactive. Others, like oil of turpentine, camphor, and sugar, are optically active when in the liquid state or in solution. In the former case, the molecules of the substance have no twisted structure, but they unite to form crystals having such a structure. As Pasteur expressed it, we may build up a spiral staircase—an asymmetric figure—from symmetric bricks; when the staircase is again resolved into component bricks, the asymmetry disappears. Discussing the question of the molecular constitution of dextro and lævo-tartaric acids, he anticipates in a remarkable manner the views at present held by chemists. "We know, on the one hand," he says, "that the molecular structures of the two tartaric acids are asymmetric; and, on the other, that they are rigorously the same, with the sole difference of showing asymmetry in opposite senses. Are the atoms of the right acid grouped on the spirals of a right-handed helix, or placed at the solid angles of an irregular tetrahedron, or disposed according to some particular asymmetric grouping or other? We cannot answer these questions. But it cannot be a subject of doubt that there exists an arrangement of the atoms in an asymmetric order having a non-superposable image. It is not less certain that the atoms of the left acid realise precisely the asymmetric grouping which is the inverse of this." Pasteur regarded the formation of asymmetric organic compounds as the special prerogative of the living organism. It had frequently been noticed that impure calcium tartrate, when mixed with organic matters, as is the case when it is obtained in the process of preparing tartaric acid from argol, readily underwent fermentation. Pasteur examined the action of the ferment (apparently a *Penicillium*) on ammonium tartrate, and finding that the fermentation here followed a normal course, ending with the destruction of the tartrate, repeated the experiment with ammonium racemate. The fermentation proceeded apparently as before; but the solution, originally optically inactive, became lævo-rotatory, the activity gradually increasing in amount until a *maximum* was reached. At this point the fermentation ceased. The whole or the dextro-tartrate had disappeared, and from the solution the lævo-tartrate was obtained in a state of purity. The asymmetric living organism had selected for its nutriment that particular asymmetric form of tartaric acid which suited its needs—the form, doubtless, which in some way fitted its own asymmetry—and had left the opposite form either wholly or, for the most part, untouched. The asymmetric micro-organism, therefore, exhibits a power which no symmetric chemical substance, such as our ordinary oxidising agents, and no symmetric form of energy, such as heat, can ever possess: it distinguishes between enantiomorphs. Asymmetric agents can alone display selective action in dealing with enantiomorphs. Pasteur, generalising somewhat hastily from the few cases which he had studied, came to the conclusion that all organic compounds capable of exhibiting optical activity might exist in the foregoing four forms—dextro, lævo, racemoid, and meso. As regards the dextro and lævo forms, this is correct; as regards the racemoid form, it is generally correct; but the meso form, as we now know, is a very special case, implying that the molecule contains two structurally identical complexes of opposite asymmetry.

RELATION BETWEEN OPTICAL ACTIVITY AND LIFE.

Whenever we prepare artificially, starting either with the elements or with symmetric compounds, any organic compound which, when it occurs as a natural product of the living organism, is optically active, the primary product of our laboratory reactions differs from it in being optically inactive. Pasteur was greatly impressed by this fact. He says:—"Artificial products have no molecular asymmetry; and I could not point out the existence of any more profound distinction between *the products formed* under the influence of life, and all others." And, again, he refers to "the molecular asymmetry of natural organic products" as "the great characteristic which establishes perhaps the only well-marked line of demarcation that can at present be drawn between the chemistry of dead matter and the chemistry of living matter." His point is that, whereas living nature can make a single optically active compound, those laboratory reactions, to which we resort in synthesising such compounds, always produce simultaneously at least two of equal and opposite optical activity, the result being intermolecular compensation and consequent optical inactivity. Non-living symmetric forces, therefore, acting on asymmetric atoms or molecules cannot produce asymmetry, since the simultaneous production of two opposite asymmetric halves is equivalent to the production of a symmetric whole, whether the two asymmetric halves be actually united in the same molecule, as in the case of mesotartaric acid, or whether they exist as separate molecules, as in the left and right constituents of racemic acid. In every case the symmetry of the whole is proved by its optical inactivity. These observations possibly afford a clue to the mode of action of the living organism in producing single enantiomorphs. This production of single asymmetric forms may be a result of the asymmetric character of the chemical compounds of which the tissues of plants and animals are built up. The optically active products of the organism—the carbohydrates, the terpenes, tartaric acid, asparagine, quinine, the serum of the blood, and countless others—have been formed in an asymmetric environment, and their asymmetry is an induced phenomenon. They have been cast, as it were, in an asymmetric mould. According to this view they are a result of the selective production of one of the two possible enantimorphous forms. The same would hold good with regard to the organised tissues themselves, developed from inherited asymmetric beginnings in the ovum or the seed, or obtained by fission. Another view has been put forward by Emil Fischer. In his lecture on "Syntheses in the Sugar Group," delivered before the German Chemical Society in 1890, he says:—"Are these the only products of assimilation (of carbon dioxide and water)? Is the preparation of optically active substances a prerogative of the living organism; is a special cause, a kind of vital force, at work here? I do not think so, and incline rather to the view that it is only the imperfection of our knowledge which imports into this process the appearance of the miraculous."

The remainder of the address was devoted to consideration of selective production and consumption.

ARGON AND NEON.

On the resumption of the sitting of the section after luncheon a paper "On the Extraction from Air of the Companions of Argon and on Neon," by Professor William Ramsay and Mr. Morris W. Travers was read:—

It had been mooted by Dr. Johnston Stoney that the atmosphere of our planet might be expected to contain new gases, if such exist at all, with densities higher than 8 or thereabouts; the authors therefore set to work to ascertain whether it was possible to separate light and also heavy gases from argon; the method adopted was systematic repeated liquefaction and fractional distillation of the liquefied gases. As much as 18 litres of argon was submitted to experiment, and in course of treatment gas of lower and lower density was obtained, ranging from 17 to 9·76—in fact, until a stage where the gas was no longer liquefiable under the existing conditions—namely, that of the temperature of air boiling under a pressure of about ten millimétres. This gas was neon mixed with minute quantities of argon and nitrogen; therefore, making allowance for these, the density of neon would be 9·6. Neon, moreover, fulfils the conditions foretold for such an element; it is monatomic, its refractivity is low, 0·3071, or probably lower, and it has a characteristic spectrum. Incidentally it was noted that neon is not the only companion of argon met with in these experiments, for in addition to it there are krypton, metargon, with a spectrum closely resembling that of carbon monoxide, and a still heavier gas not previously described, which the authors propose to name xenon, which exists only in very minute quantity. As regards neon, the 18 litres of argon did not contain more than 50 cubic centimétres of it; the proportion in air must therefore be about one part in 40,000.

Professor J. Emmerson Reynolds explained in another contribution that these new elements fell properly into the ranks of the periodic classification of elements, a fact much appreciated in chemical circles, whilst Sir Norman Lockyer was of opinion that argon and helium could not be connected.

Dr. Hugh Marshall described a stand for electrolytic analysis, and also read the fifth report of the committee for deciding on electrolytic methods of quantitative analysis, and consisting of Professor Emerson Reynolds, Dr. C. A. Kohn, Professor B. Frankland, Professor F. Clowes, Dr. Hugh Marshall, Mr. A. E. Fletcher, and Professor W. C. Williams. These were of a purely technical character. A report on the bibliography of spectroscopy completed the day's proceedings in this section.

TEACHING OF SCIENCE.

Dr. J. H. Gladstone read the report of the committee on "The Teaching of Science in Elementary Schools." Although science is

g headway, it does not keep pace with mathematical subjects, ason apparently being that the latter bring in the same amount ncial reward with much less trouble. To ameliorate matters it ested that teachers should – first be themselves properly trained; hat the Government inspectors should also have a better acquaint- with science than most of them now have; and, finally, that financial aid should be forthcoming to equip laboratories, seeing ience should be taught so as to inculcate scientific methods of ation, and not merely teach scientific facts.

essor H. E. ARMSTRONG made a communication connected the scientific education of young children, the title being nile Research." The professor described how by taking inci- rom suitable story-books children aged respectively 7½, 10½, ½ were set to work to test all the physical facts, and how by the atic use of the balance, measuring vessels, and simple apparatus, household utensils, a true spirit of scientific perception was lered. Evidence of the good effect was exhibited in the note- shown at the meeting, which demonstrated clearly how well these e investigators had mastered the scientific method of observation.

C. M. LUXMOORE, in a paper on "The Analysis of Dorsetshire drew attention to a useful investigation that is being carried out the auspices of the Dorset County Council, consisting in atically sampling the various agricultural soils of the county and ting them to mechanical and chemical analysis.

R. G. DURRANT read a paper on "Green Cobaltic Compounds." orts were presented by the committee on "The Carbo-hydrates Cereal Straws" and "The Promotion of Agriculture."

THE EAST LONDON WATER SUPPLY.

EPUTATION, consisting of members of the London School Board, waited upon Sir Hugh Owen, Permanent Secretary to the Government Board, last week, with respect to the supply of the ondon Waterworks Company as it affects those schools which ithin the company's area of supply. At the present time the an and vice-chairman of the School Board are away on their , and Mr. Graham Wallas, chairman of the School Management ttee of the Board, regarding the question as one of great urgency, ed a meeting of such members as might be in town. This was held on Thursday, and the members present resolved to hemselves into a deputation, with the result that they upon Sir Hugh Owen at the Local Government Board Offices in all. The deputation consisted of Mr. Graham Wallas, Mr. E. , M.P., Mr. Mayhew, chairman of the Sanitation Sub-Committee Board, Mr. Bowden, Rev. Scott Lidgett, Mrs. Homan, Mr. Browne, Mr. Warmington, Mr. John Lobb, and Mr. Atten- , accountant to the School Board. The proceedings were

speakers (led by Mr. Graham Wallas) pointed out that about ools under the London School Board were included in the area ly of the East London Waterworks Company, and that the popu- f the districts where the hundred schools were situated was about . In 23 of these schools, representing a population of 25,000, er supply was very unsatisfactory. The company had promised ide a constant supply during school hours, and the speakers urged that this promise should be carried out. They asked e voluntary schools, which were not as favourably situated as rd Schools—in whose case the meter system was in vogue— be placed on an equal footing with the Board Schools, and that provement in the supply which might be procured for the Board should also be extended to Voluntary Schools. Complaint made that, although there was a guarantee given by the com- 1895 to maintain a constant supply, there was no guarantee as sure, and cases were cited in which the pressure did not extend he ground floor.

JOHN LOBB asserted that the company's increase of supply the past twenty years had not been commensurate with the in- demand, and also complained that during that time the pipes been properly repaired and renewed. Economy was at the the present trouble.

UGH OWEN, in reply, expressed his sympathy with the objects deputation, and promised to communicate his course of action gard to the East London Waterworks to the School Board in rse.

THE L.G.B. WILL DO SOMETHING!

understood that Sir Hugh Owen will write a letter to the East Waterworks Company, in which he will embody the views of putation—practically making them the views of the Local ment Board, and calling upon the company to fulfil their , made in 1895, of a constant supply in the case of the schools ome within the company's operations.

PHOTOGRAPHS WITHOUT VISIBLE LIGHT.

A MOST attractive and scientifically startling paper was read last week before the British Association by Dr. W. J. Russell, who dealt with "The Action exerted by certain Metals and Organic Substances on a Photographic Plate," and demonstrated by means of photographs and elucidatory remarks that a picture can be obtained on a sensitive photographic plate in total darkness—that is, that by other means than light the film can be so acted on as to get a picture by submitting the film after exposure to treatment identical with that to which the light pictures are subjected. The material, metallic or otherwise, to be tested was placed over a sensitive plate either in contact with an intervening screen of air or some other material, or the order was reversed and the sensitive plate placed above; the period of leaving in this position varied from a few hours to a week, according to circumstances, the time being less with more active substances, with the proximity of the object to the sensitive plate, and with increase of temperature; there is, however, a limit to the temperature that can be employed in practice—namely, about 55°. Many pictures that had been obtained in this way were exhibited on the screen and beautifully demonstrated the facts that the author brought forward. Printing ink was shown to be very active in the sense indicated. Some ordinary type, a portion of the cover of *Punch*, and the wrapper of a packet of tobacco had been submitted to the test, and had reproduced strongly-defined pictures; the last-mentioned was particularly interesting, inasmuch as the red ink had proved active, the blue inactive. Strangely, writing ink (old-fashioned) is quite inactive, and paper having writing on it in ink, even over a hundred years old, when placed between a sheet of active material and a sensitive plate yielded a picture in which the writing appeared quite distinctly, white on black, in spite of the original being in some cases indistinct; ferrous sulphate behaves like ink. The list of materials that are active is very long, and includes wood, which gives a picture of the grain and knots. Many metals are active, but zinc is very active only when bright, so that a dirty sheet of zinc rubbed with sand-paper gives a picture of the scratches. Many alloys are also active, pewter and fusible metal being two of them, and curiously some brasses are, whilst others are not. The effective agency that passes from the material to the sensitive plate shows peculiarities. It passes through gelatine gutta-percha, celluloid, collodian, wet gum arabic, and some paper, whilst other paper, glass, minerals transparent to light, and many other substances are opaque to these emanations, and some striking effects were exhibited demonstrating the interference of these opaque substances when interposed between an active substance and the sensitive plate. For instance, a five pound note placed printing downwards on the sensitive plate gave a picture of the printing inscription, but when placed within a zinc plate with the printing towards the zinc plate it gave a picture of the opaque paper with the water marks distinctly showing, and what is still more astonishing the zinc plate, after contact with the note, itself yielded a picture of the inscription, showing that the influence from the ink had passed to the zinc plate. It was noteworthy that the signature was not in writing ink. A cutting from *The Times*, the paper being transparent, showed a picture of the printing on both sides; the picture, moreover, was reversible, showing that a perfect picture of both sides of the paper had been impressed on the one plate. This interesting phenomenon, so well demonstrated by the author, is however not quite explained, but the great amount of work he has done leads him to the provisional opinion that the effect is due to the evolution of hydrogen peroxide. For this explanation he advanced proof and arguments, which in turn were accepted provisionally by most of the speakers in the discussion that followed. These included Professors Clowes, McLeod, Armstrong, Gladstone, Vernon Harcourt, Kohn, and others. Incidentally, a parallelism was suggested between the effect observed by Dr. Russell and the effects connected with odours referred to by Professor Ayrton in his presidential address before Section A.

ANSWERS TO CORRESPONDENTS.

L. & S.—We will see what we can do in the matter.

D.G. & S.S.A.—You will see the matter has been attended to. The point had been overlooked. We are obliged for the notification. The task is laborious in the extreme, and with the greatest vigilance such slips will occur, especially during the holiday months. It was not a mistake for 5d.

QUERY.

FLINT DUST.—What commercial value has ground flints, and in what industries is it used? An answer in this paper will much oblige.—SILICA.

DEVELOPING SULPHUR DEPOSITS.—It is reported that an American group of capitalists is about to exploit the deposits of sulphur lately discovered at Ixtaccihuatl. It is to be hoped they will also discover, or rather invent, some simpler name for the place, or the attempts to pronounce this tongue-paralysing agglomeration of alphabetical atoms may lead to language being used of a nature akin to the deposits.

THE PHILADELPHIA COMMERCIAL MUSEUM.

THE Philadelphia Commercial Museum—an organisation established to assist in the promotion of United States exports of manufactures—has published a special report upon the possibilities of manufacturing competition from Japan. The report says:—"About two years ago there was considerable agitation in manufacturing circles of the United States over the fear that the Japanese would enter the American markets and undersell home manufacturers in certain important lines. The cheap labour of Japan, coupled with the ability of Japanese workmen to copy almost exactly articles of foreign manufacture, it was argued, would result in the production of good imitations of articles manufactured in the United States at a much lower cost than they could be made by our own manufacturers. But Japan is going through the experience that falls to the lot of all countries in which manufacturing industries are rapidly developed. The price of labour is rising rapidly, and the cost of fuel and raw materials is increasing, thus adding greatly to the expense of manufacturing. Advices recently received by the Philadelphia Commercial Museum show that prices of commodities of all sorts are rising rapidly in Japan, the average price level in Tokio having increased in 1897 about 26 per cent., while in Osaka the rise was 31 per cent. Prices have doubled in the last ten years. During 1897 the cost of raw materials used in manufacturing rose from 20 to 60 per cent. For example, coal rose 59 per cent., timber 35 per cent., and floss silk 22 per cent. There was a proportionate increase in the price of provisions. Wages are much higher than ever before, domestic servants requiring about 10 per cent. more pay, and the price of labour is almost doubled, while skilled artisans demand a considerably higher wage. The cost of electric lighting, gas, water, and transportation have all increased."

Trade Notes.

RESEARCH GRANTS.—The British Association has made the following grants of money for scientific purposes. *Mathematics*: Electrical standards (and £75. in hand), £225.; seismological observations, £75.; science abstracts, £100.; heat of combinations of metals, £20.; radiation in a magnetic field, £50. *Chemistry*: Action of light upon dyed colours, £10; relation between absorption spectra and constitution of organic substances, £50.; chemical and bacterial examination of water and sewage, £10.

THE MEXICAN CHEMICAL TRADE.—There was scarcely any variation in the total value of the imports of chemical products. There was, however, a very considerable increase amounting to nearly 40 per cent. in the imports of caustic soda and potash and sulphates of iron and copper, which was set off by a decrease in paints and colours (probably due to over importation last year), and in miscellaneous drugs and chemicals. The values of the imports according to these subdivisions were as follows:—Paints and colours, £54,419.; caustic soda and potash and sulphates of iron and copper, £98,735.; and miscellaneous drugs and chemicals, £191,655.

THE NEW CONVEYOR CO.—Mr. Gilbert Little (the chairman and managing director of the New Conveyor Co., Ltd., Smethwick) has been the recipient of some very favourable opinions upon a retort house plant recently put down by the firm. The engineer-in-chief of the third largest industrial undertaking in England informs Mr. Little:—"I have been all over the United States, and have seen no elevators equal in design or durability to your own." This engineer-in-chief supports his belief in the Smethwick manufactures by recommending his directors to send the order for one of the largest installations of conveyors and elevators ever placed in this country to the New Conveyor Co., Ltd.

THE NORTH-EASTERN SALT TRADE.—The registration of a company called the "North-Eastern Salt Co., Ltd.," for carrying on the salt trade in the Middlesbrough or South Durham district, has not attracted much attention, by reason possibly of the modesty of its capital, which is only £10,200. But its significance, remarks a correspondent, lies in the connections of the seven subscribers to the memorandum of association, filed with the Registrar of Joint Stock Companies. It would seem that the several companies and firms manufacturing salt for sale on the North-east coast, including the Salt Union Ltd., have come to a satisfactory arrangement for working together, as the seven subscribers to the memorandum of association comprise Mr. Richard Grigg, manager of the Salt Union, Middlesbrough district; Mr. John W. Watson, of the Tees Salt Co., Ltd.; Mr. W. W. Storr, of the Cleveland Salt Co., Ltd.; Mr. Ralph Walker, of the Hartlepools Salt and Brine Co.; and Mr. Arthur Whipham, of the owners of the Middlesbrough Estate, Ltd. These gentlemen, who are by the articles of association to be the first directors of the company, have appointed Mr. Richard Grigg as chairman and general manager.

WE MAY GROW OUR OWN SUGAR.—Messrs. Terry & Co., Glasshouse-street, writing with reference to a paragraph headed "Can We Grow Sugar Beet?" which appeared in the *Daily Mail* recently, state that some time ago their senior partner had some experiments made with beet in the neighbourhood of Sandwich. As the result some white Silesian sugar beet roots were grown, and Professor Voelcker, in forwarding an analysis, wrote:—"The composition of these roots shows plainly that the locality and soil upon which they were grown are well adapted for the cultivation of sugar beet. The roots are equal if not superior in sugar-producing qualities to sugar beet grown in the best districts in France and Belgium."

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are unchanged at 9½d. for both 90's and 50/90's. In carbolic acids, crystals are rather easier at 6¾d., but crude is unaltered. Naphthas steady and unchanged. Pitch is steady at 24s. 6d. to 25s., f.o.b. East Coast. Anthracene dull, with 30% A 4d. and B 3d. to 3½d.

Sulphate of ammonia dull, and prices rather weaker, though present values are for the most part nominal. Beckton quotation for prompt has been withdrawn. For October-December £9 17s. 6d. is asked. London outside makes are quoted £10., Liverpool £10. to £10. 1s 3d., Hull £9. 18s. 9d., and Leith £10, all prompt.

MISCELLANEOUS CHEMICAL MARKET.

Trade in the chemical market during the past week has been good, but there are not many changes in prices. Bleaching powder is steady for prompt at £5. 2s. 6d. per ton. Contracts over 1899 would be entered at £5., but there is not much doing "forward" at present. Caustic soda remains unchanged in price, and a fair amount of business is being done prompt and forward. Salt cake is firmly held, and 25s. to 26s is the general quotation to-day. Chlorates of potash and soda rather quiet. Sulphur in moderate request. Prices: Rock, £4. 12s. 6d.; "Flowers," £7. 2s. 6d.; "Roll," £6 2s. 6d. Sulphate of copper well maintained at £17. White powdered arsenic has a strong position and price is advancing; £16. at Garston is value to-day. Ammonia salts sell slowly at former rates. Prussiate of potash in good demand, and price to-day is 6⅝d. per lb. Carbolic acids rather weaker, but without quotable change. Business in finer chemicals is of a satisfactory nature.

REPORT ON MANURE MATERIAL.

The market has been perhaps rather quieter, but prices are very firm for all descriptions of material.

Sales of mineral phosphates continue to be made to the Continent and the Mediterranean at extreme prices, but for the United Kingdom there is very little doing.

Further sales of East Indian bone meal have been made at £4. 15s. per ton, ex quay, £4. 13s. 9d having been repeatedly bid and refused. £4. 15s. per ton is also required for shipment ahead.

Nitrate of soda is a shade firmer and 7s. 7½d. per cwt. is the nearest value for fine quality on spot.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron steady: Scotch warrants closed at 48s. 1d; Middlesbro', 42s. 10½d. cash; and hematite, 53s. 11d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed £51. 13s. 9d. to £51. 18s. 9d. cash, and £51. 16s. 3d. to £52. 1s. 3d. three months. Tin flat: Straits closed at £73. 10s to £74. cash, and £73. 15s. to £74. 5s. three months; Australian, £74. 3s. 9d.; English ingots, £76. to £76. 10s. Lead steady: Spanish, £12. 17s. 6d. to £12. 18s. 9d; English, £13.; Silesian spelter, ordinary, £21. 15s. Nickel, 1s. 2½d. Antimony, £37. Quicksilver: First hands, £7. 12s 6d.; second hands, £7. 8s. *Copper shares* quiet: Cape, 4 11/16 to 4 13/16; Copiapo, 2¼ to 2⅜: Libiola, 2 to 2¼; Mason and Barry, 3⅝ to 3⅞; Rio Tinto, 28 7/16 to 28 9/16; Tharsis, 6½ to 6¾.

GLASGOW, WEDNESDAY.—Market firm, and a fair business; Scotch done at 48s. to 48s. 1d. cash, and 47s. 11d. to 48s. 1½d. month; buyers, 48s. 1d. cash; sellers, 48s. 1½d. Cleveland done at

month ; buyers, 42s. 10½d cash ; sellers, 42s. 11d. Cumber-matite done at 53s. 10½d. to 53s. 11½d. cash ; buyers, cash ; sellers, 54s. Middlesbrough hematite, buyers, 52s. ellers, 53s.

VERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

.—Palm oil is slow of sale. Small quantities of Lagos have ne at £20. 10s. to £20. 15s Olive steady, with a small busi-ssing in Lisbon for £30. and Malaga £30. 10s. per tun for t. Linseed firm at 18s. to 18s. 6d. per cwt. for Liverpool in export casks. Cottonseed unaltered, at 16s. to 16s. 3d. for Liverpool refined. Market closes firm. Castor oil steady, od seconds Calcutta 3 $\frac{5}{16}$d. First pressure French 2$\frac{15}{16}$d. to r lb. Tallow is in better request at satisfactory prices. Resin demand, with common quoted at 4s. 3d , and finer grades t 4s. 6d. to 5s. 3d. medium, and 6s. 6d. to 7s 6d. per cwt. for pirits of turpentine offered at 22s. to 22s. 6d. spot, with a fair Petroleum steady, with Russian refined at 5d. and American 7¼d. per gallon.

ES.—There is a continued firm feeling apparent in the market rican linseed, and spot parcels of Western have had a moder-r sale at previous full rates, viz., £6. 3s 9d. to £6. 8s. 9d., Liverpool makes are unchanged in value at £7. 5s. to £8. per cording to brand, but holders experience rather an improved thereat, fair sales having been transacted. The demand for choice American decorticated cottonseed is only on a moderate ut the quotations are steadily maintained at the recent level, 5. 7s. 6d. to £5. 15s , according to quality, with Liverpool elling quietly at former currencies, viz., £5. 15s. to £6. 10s. according to brand. Home crushers have experienced a fair of inquiry from customers of Liverpool undecorticated makes, rket ruling very steady at £3. 18s. 9d to £4. 10s. per ton, g to brand. There is no material alteration to record in the for Egyptian on the spot, sellers of prime quoting £3. 13s. 9d. 15s. per ton, and there is a fair amount of inquiry going on

OURS.—Prices are steady, and practically without change. : Oxfordshire—common £10., medium £12 , best £15. ; hire—common 40s., medium 50s., best 60s. ; Welsh—best 9 s.; , 50s., and common, 18s. ; Devonshire, 40s. to 45s. ; J.C., 65s. Umber : 40s. to 45s. White lead : £16. Red changed. Venetian red : £6. to £10. Cobalt : Prepared s. 9d. ; black, 9s. ; blue, 6s. Oxide of iron : Common, £7. ; , £10.; finest, £20. Zinc oxide : £22. 10s. to £25.

ULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

S.—The market here is not active. Current values recorded a go have changed but little. Linseed oil has gone firmer, and be bought under a trifling advance upon last week's quotation. ports to date against the same recorded to the same time for ar have been : Wheat, 1,985,036 qrs. against 1,548,527 qrs. ; 71,016 cwts. against 250,500 cwts ; linseed, 238,541 qrs against qrs. ; rapeseed, 54,783 qrs. against 59,995 qrs. ; cottonseed, tons against 130,182 tons ; oilcake, 9,537 tons against 7,438 live oil, 4,362 tuns against 3,289 tuns ; tar, 2,554 brls. against brls. Linseed oil is firmer, and quoted—spot, 16s. 1½d., 15s. 10½d. month, and buyers at 15s. 6d. last four months ; and refined £1. to £1. 10s. per ton extra. Refined cotton oil ed 14s., spot, naked ; forward (Nov./April) 13s. 3d., sellers. continues very scarce, with prices ruling nominally unchanged. oil, extracted here, a trifle easier ; cold drawn medicinal er lb. ; first pressure £28. per ton, in barrels ; in cases 3$\frac{3}{16}$d. ; second pressure £27. per ton, in barrels, and 3$\frac{3}{16}$d. per lb. in Olive oil unchanged. Resins quiet. Cod oils from £16. to s. per ton, in barrels. Olive oil soap from £16. 10s. per ton, uling firm ex quay Hull, nett terms, 62% usual margin extra. from £19. per ton, in barrels.

ES.—The situation is unchanged, the demand may be a little d, but there is much room for more. Prices remain firm, n a great measure to the stocks of both linseed and cottonseed rmly held. Linseed cakes, 95% purity, £7. 7s. 6d. to £7. 10s. ; Oilcakes (linseed) £6. 7s 6d. to £6. 10s. per ton ; Russians, s. to £7. 2s. 6d. ; Americans, £7. 2s 6d. Cotton cakes, best £4 2s. 6d. to £4. 3s. 9d ; seconds, £4. to £4. 1s. 3d. ; Nov.-£4. Rape cakes unchanged.

NTS.—Fair demand and the trade active, prices unchanged. y colours in oil from £10. per ton. Dry mineral colours £3. Disinfectant powders, 20% carbolic, £4. 10s.; 15%, £4. 5s. ; 3. 15s. Sanitary fluid from 10d. per gallon. Black varnish s. per ton, in barrels.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The market for sulphate of ammonia here is in rather a peculiar and nondescript position. The article at the moment is hardly at all called for, there being practically no buyers ; but nevertheless the sellers are firm in their notions, and £10 2s. 6d., spot, Leith, is the lowest to-day that the most of them are inclined to go. The fact is that the article is in rather short stock, and holders feel strengthened because of that circumstance. There is no talk of anything for forward. Burning oils continue healthy at the late rise, and manufacture and supply are already pretty fully arranged for, forward over the season. Quite new business could not now be readily carried through except at some fractional premium. Solid paraffins and all ordinary chemicals unchanged.

Chief prices current are :—Soda crystals, £2. 5s. to £2. 12s. 6d. nett, Tyne ; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow ; caustic soda, white, 74° £7. 15s. od. 70/72° £7. 2s. 6d , 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 25s. od. ; borax, English refined, £13. 10s , and boracic acid, £25. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d , and 1-cwt casks, £6. 15s.. nett, Liverpool ; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow) ; bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow) ; chlorate of potash, 3½d less 5%, Liverpool ; nitrate of soda, 7s. 7½d. to 7s. 9d. ; sulphate of ammonia, £10. to £10. 2s. 6d. prompt, f.o.b. Leith ; salammoniac, first and second white, £35. and £33 nett, any port ; sulphate of copper, £16. 10s. 0d. less 5% Liverpool ; paraffin scale, hard, 1⅜d. to 1½d. per lb., and soft 1½d. per lb. ; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb ; paraffin spirit (naphtha), 6½d. to 7d. per gallon ; paraffin oil (burning), No. 1, 6d , and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower) ; ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 7,677 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

There is still a dulness in the chemical trade and prices remain unchanged. There is a fair demand for soda crystals at £2. 12s. 6d. per ton, gross weight, locally. Caustic soda is quiet at £8. per ton for 76/77%, and £7. 5s. per ton for 70%. Sulphur is firm at £4. 15s. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett ; do. hards, £5. 15s. per ton, nett ; caustic soda, 76/77% £8. and 70% £7. 5s. to £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett ; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett ; alkali, 36%, £3. 12s. 6d. per ton, nett ; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett ; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett ; do., 1 cwt. kegs, £7. per ton, nett ; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett ; do., 100° Tw., £3. per ton, nett ; do., 140° Tw., £3. 7s. 6d. per ton, nett ; soda crystals, casks, £2. 12s. 6d. per ton, gross weight ; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett ; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett ; blanc fixe, £7. 5s. per ton, nett ; chloride of barium, refined crystals, £6. 15s. per ton, nett ; do., crude calcined, £6. per ton nett ; sulphide of barium crystals, £4. 15s. per ton, nett ; carbonate of alumina, £30. per ton, nett ; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The market here is quiet and the tendency of prices downward. Coke continues in strong demand for both local and export, and is firm at 18s. to 21s. per ton, according to quality. Best Northumbrian steam, 11s. 6d. to 12s. per ton ; second qualities, 10s. 6d. to 11s. per ton ; small steam, 6s. 6d. to 7s. per ton ; gas coals, 9s. 6d. to 10s. per ton ; bunker coals, 9s. to 9s. 6d. per ton ; coke, 18s. to 21s. per ton.

New Companies.

Lowestoft Ice Co., Ltd.—CAPITAL £25,000. in £1. shares. This company has been formed to acquire the business of ice manufacturers, importers, exporters and shippers, ice-making machinery manufacturers, ship owners, etc. The subscribers are :—W. R. Jones, 128, Denmark-road, Lowestoft, gentleman ; J. Jackson, 11, Norwich-road, Lowestoft, smackowner ; S. White, 170, N. Raglan-street, Lowestoft, smackowner ; W. Lang, Regent-road, Lowestoft, smackowner ; G. A. Barbor, 24, Clapham-road, Lowestoft, fish merchant ; B. Mummery, 28, Gordon-road, Lowestoft, fish merchant ; N. Spashett, Waveney Chambers, Lowestoft, shipbroker.

International Fibre Syndicate, Ltd.—Capital £25,000. in £1. shares. This company has been formed to carry on the business of purchasers, combers, preparers, spinners, and dyers and dealers in ramie grass, flax, hemp, jute, and other fibrous substances. The subscribers are :—C. J. Dear, 28, Victoria-street, Westminster, merchant; C. E. C. Townsend, 22, South Frederick-street, Dublin, land agent; A. G. Dear, 37, Victoria Avenue, Surbiton, merchant; W. Barrett, Windsor Lodge, Monkstown, county Dublin, assistant; T. McFerran, Galbally, Tipperary, auctioneer; P. Bergin, 22, South Frederick-street, Dublin, assistant; G. Jones, 95, Lower Bagot-street, Dublin, assistant. Registered office, 22, South Frederick-street, Dublin.

Shirley, Spence, and Bedford, Ltd.—Capital £25,000. in shares. This company has been formed to carry on the busine chemists, druggists, oil and colour merchants, chemical manufactu fruit, provision, wine and spirit merchants, bakers, etc. The scribers are .—E. Bourke, 38, Thomas-street, Dublin, tea merch A. Armstrong, Northumberland Works, Lower Abbey-street, Du merchant: J. Shirley, 79, Moyne-road, Dublin, druggist; J. Wa Jones'-road, Dublin, printer: A. Spence, 5, St. Vincent-st Berkeley-road, Dublin, traveller; T. W. Belford, 122, S. Circ road, Dublin, wasehouseman; E. A. Inman, 9, Eglington P Kingstown, cashier. Registered office, 45, St. Mary-street, Dublin.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 3rd.

Acetanilide—
Holland, £56 — A. & M. Zimmermann

Acetone—
France, 2 dms. — P. F. Knowlden
Germany, 2 — Petri Bros.

Alkali—
France, 120 c. — J. Harrison
U. States, 1,440 — J. Manger & Sons
Belgium, 100 — Leach & Co.

Alumina—
Germany, £30 — R. W. Greeff & Co.

Alumina Sulphate—
Germany, £30 — R. W. Greeff & Co.

Ammonia—
Holland, £40 — H. Lorenz

Antimony Ore—
Japan, 20 t. — Fielder, Hickman & Co.
France, 6 c. — H. Johnson & Sons
A. Turkey, 51 t. — Hallett & Fry

Asbestos—
Italy, £600 — W. Byford
——, 19 — "
Canada, 110 — "
Italy, 70 — Bender & Martiny

Barium Chlorate—
Germany, £51 — G. Boor & Co

Barytes—
Belgium, 52 cks. 49 pks. — J. L. Lyon & Co.
Holland, 30 pks. — W. H. Carey & Sons
" 42 — J. Owen
" 113 — W. Harrison & Co.
Germany, 38 cks. — J. L. Lyon & Co.
" 57 — W. Harrison & Co.

Bleaching Powder—
France, 80 cks. — W. E. Cole
" 80 — J. M. Steel & Co.

Bones—
Belgium, 2 c. — Cole & Carey

Boracic Acid—
Italy, 2 pks. — Beresford & Co.

Caoutchouc—
E. Indies, 37 c. — J. Barber & Co.
" 7 — H. Devitt & Co.
U. States 80 — Chautard & Christensen
Straits, 360 — Soundy & Sons
E. Indies, 12 — Henderson Brs.
Zanzibar, 39 — F. Huth & Co.
Germany, 10 — Butler's Wf., Ld.
Sweden, 8 — M. Dk. Co.
France, 42 — H Johnson & Sons
B. Honduras, 3 — L. & I. D. Jt. Co.
Holland, 80 — Prop. Bull Wf.
E. Indies, 3 — L. & I. D. Jt. Co.
Natal, 25 — "
Zanzibar, 10 — "
Straits, 204 — Huttenbach & Co.
Gambia, 1 — T. H. Lee

Carbolic Acid—
Germany, 50 pks. — Blagden, Waugh & Co.

Castor Oil—
Italy, 5 cs. — J. Barber & Co.

Caustic Potash—
France, 20 dms. — Petri Brs.

Chemicals (*otherwise undescribed*)**—**
Belgium, £46 — John Cockerill Line
Germany, 672 — A. & M. Zimmermann
" 11 — Butler's Wf., Ld.
" 175 — L. & I. D. Jt. Co.
Belgium, 226 — T. H. Lee
Holland, 15 — Hernu, Peron & Co.
" 410 — T. H. Lee
France, 28 — Mory & Co.
U. States, 15 — W. Dixon
" 832 — C. E. Jones
Germany, 80 — B. & F. Wf. Co.
Belgium, 17 — Brummerstaldt
Germany, 75 — Phillips & Graves
" 28 — J. Norrenberg

Copperas—
Germany £25 — R. W. Greeff & Co.

Copper Oxide—
Germany, 2 cks. — H. Lambert

Cream of Tartar—
Holland, 10 kgs. 24 pks. — Kirkpatrick, Barr & Co.
Italy, 21 cks. — Fellows, Morton & Co.
Spain, 38 pks. — A. Owen
" 13 — B & F. Wf. Co.
France, 3 — H. Johnson & Sons
" 5 — M. Ashby, Ld.
" 2 — J. W. Cook & Co.
" 40 — W. C. Bacon & Co.
" 7 — B. & F. Wf. Co.
" 5 — C. Christopersen & Co.

Dyestuffs—

Aniline
Holland, 4 pks. — Brooke, Simpson & Co.

Divi Divi
E. Indies 137 bgs. — Baxter & Hoare

Extracts
Canada, 55 cks. — Furness, Withy & Co.
Denmark, 6 pks — Sorensen & Co.
France, 35 cks. — L. J. Levenstein & Sons

Fustic
W. Indies, 2 t. — G. T Benton & Son

Indigo
E. Indies, 31 chts. — Parsons & Keith

Logwood
W. Indies, 11 t. — G. T. Benton & Son

Myrabolams
E. Indies, 6 pks. — L. & I. D. Jt. Co.
Ceylon, 683 bgs. — H. J. Perlbach & Co.

Orchella
Ceylon, 3 pks. — R. G. Hall & Co.
Portugal, 186 bls. — Prop. Bull Wf.

Saffron
Spain, 2 cs. — Major & Field

Shumac
Italy, 500 bgs. — C. S. Lovell

Tanners' Bark
Germany, 33 t. — Baxter & Hoare
Adelaide, 50 — "
Natal, 5 — Leach & Co.
" 43 — A. & W. Nesbitt
" 3 — Flack, Chandler & Co.
" 26 — Boutcher, Mortimore & Co.
" 160 — T. Rennie, Son & Co.
Germany, 7 — Union L. Co., Ld.
Natal, 18 — F. Huth & Co.

Turmeric
China, 1,095 bgs. — Dalton & Young
E. Indies 231 pks. — H. A. Lichfield & Co.
" 462 bgs. — L. & I. D. Jt. Co.

Valonia
A. Turkey 52 t. — Deering & Robottom
" 40 — Hicks, Nash & Co.

Dyestuffs (*otherwise undes.*)**—**
Denmark, 2 cks. — M. D. Co.
U States 23 cs. — Carter, Paterson & Co.

Farina—
Canada, 103 bgs. — R. G. Hall & Co.
Italy, 2,704 bxs. — Wrightson & Son
Holland, 50 pks. — J. Knill & Co.
Italy, 168 cs. — C. Tennant, Sons & Co.

Glucose—
U. States, 50 pks. 285 cwts. — Barrett, Tagant & Co.
Canada, 2,284 — 2,284 — R. G. Hall & Co.
" 500 — 500 — E. Thompson & Co.
U. States, 250 — 250 — "
" 1,500 — 1,500 — Beck & Pollitzer
" 2,000 — 2,000 — Fellows, Morton, & Co.
" 700 — 700 — Barrett Tagant & Co.
" 500 — 500 — R. G. Hall & Co.
" 500 — 500 — Bellamy's Wf. Ld.
" 800 — 800 — L. & I. D. Jt. Co.
France, 260 — 260 — L. Norman & Co., Ld.
" 50 — 50 — B. & F. Wf. Co., Ld.
Canada, 2,000 — 2,000 — L. & I. D. Jt. Co.
U. States, 1,000 — 1,000 — Pearce, Pelly, & Co.
" 500 — 500 — Thames S. T. & L. Co.

Glue—
U. States £26 — Armour & Co.
Holland, 103 — J. Barber & Co.
Germany, 135 — L. & I. D. Jt. Co
Belgium, 679 — R. G. Hall & Co.
France, 29 — Mory & Co
" 9 — Mess. Parisiennes
Germany, 7 — Butler's Wf., Ld.
Holland, 50 — T. H. Lee
France, 50 — B. & F. Wf. Co.
" 30 — W. E. Cole
" 80 — Morison, Pollexfen & Co.
Germany, 10 — Phillipps & Graves

Glue Stock—
Belgium, 44 bls — T. Ronaldson & Co.
" 15 — D. C. Thomas & Sons
France, 1 — E. Flageollett & Co.
Germany, 60 — W. Balchin, Ld.
" 43 — Hicks, Nash & Co.

Glycerine—
Holland, £350 — J. Barber & Co.

Iron Bromide—
Germany, 10 cks. — A. & M. Zimmermann

Iron Oxide—
Germany, 5 cks. — H. Lambert

Magnesite—
Germany, £6 — Craven & Co.

Manganese—
Germany, 5 t. — R. Ulrich

Manure—
France, 150 t. — Burnett Brs. & Sons

Methyl Alcohol—
U. States, 1,640 gls. — H. Wallace & Co.

Mica—
Germany, £16 — Craven & Co.

Molasses—
U. States, 1,122 cks. 7,251 c. — Williams, Torrey, & Co.
" 250 — 1,200 — H. Gibbs & Sons
" 800 — 4,800 — Deering & Robottom
" 110 — 592 — Ohlenschlager Brs.
Holland, 549 — 3,040 — J. R. Francis & Co.

Ochre—
Holland, 24 pks. — Phillipps & Graves
France, 54 — W. Harrison & Co.

Paraffin Scale—
U. States, 157 brls. — Williams, Torrey, & Co.
" 451 — Anglo-American Oil Co., Ld.

Phosphate Rock—
France, 180 t. — West & Penrose
Belgium, 160 — Odams Manure & Chemical Co.
Algeria, 1,800 — Anglo-Contl. Guano Works
Bona, 1,450 — A. Ford & Co.

Pitch—
N. Russia, 360 cks. 500 brls. — Fellows, Morton, & Co.

Plumbago—
U. States, 84 bxs. — Lunham & Moore
" 3 brls. — "

Potassium Bicarbonate—
Germany, 1,060 c. — H. Lambert

Potassium Bisulphite—
Germany, 10 kgs. — R. W. Greeff & Co.

Potassium Carbonate—
Belgium, 100 c. — Petri Brs.
France, 4 cks. — J. A. Reid
Germany, 10 — J. Barber & Co.
" 100 c. — Petri Brs.
Holland, 30 — "

Potassium Cyanide—
Holland, 100 c. — P. Heydmann

Potassium Sulphate—
Germany, 300 bgs. — F. W. Berk & Co., Ld.

Rosin—
U. States, 1,400 brls. — Prod. Broker's Co., Ld.
" 750 — T. Nickels & Co.

Salicylic Acid—
Germany, 12 pks. — Butler's Wf., Ld.

Saltpetre—
Germany, 5 cks. — L. & I. D. Jt. Co.
" 50 — J. Hall & Son, Ld.
" 158 pks. — P. Hecker & Co.
E. Indies, 648 — Lucas & Spencer's Wf.

Soap—
U. States, £216 — Williams, Torrey, & Co.
France, 35 — L. & I. D. Jt. Co.
" 24 — Mory & Co.
Belgium, 3 — T. H. Lee
France, 6 — H. Johnson & Sons
U. States, 6 — W. Johnston & Co.
France, 70 — Vokins & Co., Ld.
Germany, 6 — Butler's Wf., Ld.
U. States, 128 — Lunham & Moore

Soda—
U. States, 1,000 c. — G. A. Steel
" 1,200 — Furness, Withy, & Co.
" 5,000 — F. W. Berk & Co., Ld.
Holland, 200 — R. W. Greeff & Co.

Starch—
Holland, 155 cs. — Phillipps & Graves
Belgium, 200 — J. Barber & Co.
" 45 — T. Ronaldson & Co.
" 40 — C. Tennant, Sons, & Co.
" 194 — T. H. Lee
" 180 pks. — Leach & Co.
Holland, 1,349 — Little & Johnston
Germany, 40 — Phillipps & Graves
France, 20 cs. — W. E. Cole
" 140 pks. — Prprs. Dowgate Dk.
U. States, 100 — R. G. Hall & Co.
" 50 bgs. — "
" 100 — C. Tennant, Sons, & Co.

Holland, 50 pks. Hernu, Peron, & Co.
" 160 A. G. Robinson & Co.
Germany, 1,730 Horne & Co.
" 1,400 cs. "
Belgium, 110 pks. Phillipps & Graves
" 300 E. & T. Pink
" 330 F. Claydon & Co.
U. States, 20 Beck & Pollitzer
" 250 R. Bennett & Co.

Stearine—
Belgium, 188 bgs. H. Hill & Sons
France, 100 "

Sulphur—
Cartagena, 200 t. J. Forster
Spain, 100 "
Italy, 1 C. Windschugegl & Co.

Sulphurous Acid—
Holland, 10 pks. J. Barber & Co.

Tar—
Channel I., 575 brls. Burt, Boulton, & Co.
N. Russia, 12 cks. Mordaunt Brs
" 14 F. & S. Chiesman & Co.

Tar Oil—
Holland, 2,640 glns. T. H. Lee

Tartaric Acid—
Holland, 17 pks B. & F. Wf Co.
" 3 Kirkpatrick, Barr, & Co.
Belgium, 8 R. W. Greeff & Co.

Turpentine—
U. States, 5 961 brls. Nickoll & Knight
" 3,210 Prod. Brokers' Co., Ld.
Russia, 210 R. L. Archibald

Ultramarine—
Germany, 3 cs. Butler's Wf., Ld.
Holland, 20 cks. Thames S. T. & L. Co., Ld.
Belgium, 5 pks. W. Harrison & Co.
Germany, 54 Steinhoff, Sons. & Co.
" 2 Phillipps & Graves
Holland, 2 cks. Taylor Brs.

Varnish—
Belgium, 2 pks. Leach & Co.
U. States, 22 Lunham & Moore
" 1 Wainwright Brs. & Co.
Germany, 11 Butler's Wf., Ld.
" 5 Phillipps & Graves
Belgium, 20 Sawer, Sons. & Co.
" 4 John Cockerill Line

Waste Salt—
Germany, 50 t. Perkins & Homer

White Lead—
Belgium, 3 brls. G. E. Banes
" 25 pks. J. L. Lyon & Co.
" 41 Burrell & Co.
" 46 T. & W. Farmiloe
Holland, 20 J. R. Francis & Co.
" 49 A. & M. Zimmermann
" 50 cks. Randall Brs.

Wood Pulp—
Sweden, 320 pks. Alsing & Co.
" 160 G. Hagborg & Co.
" 50 Tough & Henderson
" 80 Christophersen & Co.
" 202 W. G. Taylor & Co., Ld.
" 240 H. Raby & Mather
" 270 J. W. Cook & Co., Ld.
Germany, 510 E. J. & W. Goldsmith
U. States, 321 C. S. Lovell
" 375 Henderson, Craig, & Co.
Norway, 320 W. G. Taylor & Co., Ld.
" 312 Johnsen & Jorgensen
Belgium, 2,016 J. Harrison
——, 180 G. Hagborg & Co.
Canada, 11,180 Henderson, Craig, & Co.

Zinc Oxide—
Holland, 60 brls. M. Ashby, Ld.
Germany, 80 "
Holland, 2 pks. R. W. Greeff & Co.
" 50 Lon. & Til. Ltge. C. & D. Co.

LIVERPOOL.

Week ending September 1st.

Acetate of Lime—
New York, 3,250 bgs.

Acetic Acid—
Rotterdam, 9 blns.

Aluminium Sulphate—
Ghent, 50 bgs.

Barytes—
Rotterdam, 20 bgs. 85 cks.
Antwerp, 100 51

Bone Meal—
Karachi, 1,165 bgs.
Bombay, 2,134

Bones—
Maranham, 41 bgs. H. Evans & Co.
Alexandria, 110 t.

Castor Oil—
Calcutta, 335 cs. Ralli Brs.
Antwerp, 6 brls. J. T. Fletcher & Co.

Colours—
Antwerp, 1 ck.

Cream of Tartar—
Bordeaux, 28 cks.
Oporto, 4

Dyestuffs—
Extracts
Amsterdam, 2 cks.
Bordeaux, 100 cs.
Halifax, 46
Fustic
Kingston, 275 ps. Moravian Misnry Agency
" 457
Logwood
Belize, 103 t. J. E. Plumer
Myrabolams
Bombay, 2 bgs.
Orchella
Lisbon, 146 bgs.
Turmeric
Calcutta, 100 bgs.

Farina—
Havre, 2,000 sks. Cunard S. S. Co., Ld.
Stettin, 50 bgs.

Glucose—
New York, 100 brls.
Dunkirk, 200 bgs.

Glue—
Rouen, 9 cks. Co-op W'sale Society, Ld
Rotterdam, 100 bgs. 3 cs.

Limestone—
Antwerp, 2 crts.
Nantes, 1 crt. R. J. Francis & Co.

Molasses—
N. Orleans, 100 brls.
" 2,405 A. B. Booth

Paint—
Hamburg, 3 cks.

Paraffin Scale—
New York, 1,618 brls. Thompson & Bedford

Phosphates—
Ghent, 380 t.
Montreal, 510 t.

Pitch—
Amsterdam, 12 cks.
Hamburg, 1

Plumbago—
Genoa, 200 bgs.

Potash—
Dunkirk, 20 dms. Bancroft & Co., Ld.
" 48
Hamburg, 20 bks.

Pummice Stone—
Messina, 3 bgs. 13 cs. Woods, Webb & Co.
" 15

Pyrites—
Huelva, 5,878 t. Matheson & Co.

Rosin—
New York, 7,000 brls.
Savannah, 3,500

Salicylic Acid—
Hamburg, 5 cs.

Salt—
Madeira, 817 bgs.

Saltpetre—
Karachi, 301 bgs.
Calcutta, 611 Ralli Brs.

Soap—
Boston, 50 brls.
Philadelphia, 350 cs.
Rotterdam, 11
Hamburg, 50 1 bskt.

Soapstone—
Bordeaux, 50 bgs. Geo. G. Blackwell, Sons & Co.

Sodium Nitrate—
Iquique, 12,920 bgs. Graham, Rowe & Co.

Starch—
Antwerp, 403 cs. J. T. Fletcher & Co.
" 367
Rotterdam, 95 cs.
" 80 Browne, Geveke & Co.
Montreal, 148 sks.

Stearine—
Antwerp, 20 bgs.
" 25 2 cks. J. T. Fletcher & Co.

Sulphur—
Catania, 220 bgs. 60 cks. 50 bls.

Tallow—
New York, 12 tcs.
Boston, 285 105 brls.
Philadelphia, 65 Armour & Co.
" 60
Madeira, 1 brl.
Hamburg, 1 ck.
Campania, 334 cks.

Tar—
Boston, 8 brls.

Tartaric Acid—
Rotterdam, 8 cks.
Messina, 4

Turpentine—
Savannah, 1,874 brls.

Ultramarine—
Rotterdam, 24 cks.
Antwerp, 4
Hamburg, 11 cs.

Varnish—
Hamburg, 2 cks.

Waste Salt—
Hamburg, 203 bgs.

White Lead—
Rotterdam, 166 cks.
Antwerp, 7

Wood Pulp—
Rotterdam, 153 bls. 39 pks.
Gothenburg, 6 Cowan & Co.
Montreal, 2,803 bdls. A. Rice & Co
" 1,450
Fredrikshald, 540 t.

Zinc Ashes—
New York, 4 cks. 10 brls.
Bordeaux, 534 sks. 210 pcs.

Zinc Oxide—
Antwerp, 80 brls.

Zinc White—
Rotterdam, 100 cks.

MANCHESTER.

Period ending September 3rd.

Alizarine—
Rotterdam, 24 cks. Wilson,
2 brls. Sons, & Co., Ld.
" 81 cks.

Alum—
Rotterdam, 6 cks.

Ammonia—
Rotterdam, 25 cyldrs.
" 48 Wilson, Sons, & Co., Ld.

Ammonium Sulphate—
Rotterdam, 1 brl. Wilson, Sons, & Co., Ld.

Aniline—
Hamburg, 20 cks.

Aniline Salts—
Rotterdam, 43 cks.
" 28 Wilson, Sons, & Co., Ld.

Antimony—
Treport, 2 cks.

Barium Chloride—
Rotterdam, 4 cks.

Barytes—
Antwerp, 190 bgs.
Rotterdam, 24 cks.

Beta Naphthol—
Rotterdam, 1 brl. Wilson, Sons, & Co., Ld.

Cement—
Rotterdam, 103 bgs.

Chemicals (*otherwise undescribed*)
Rotterdam, 7 cks. 1 cs.

Chrome Acetate—
Rotterdam, 10 cks.

Colours—
Antwerp, 1 ck.
Rotterdam, 44 39 cs. 1 bx. 86 brls.
51 cks. 17 cs. 13
" 79 brls. Wilson, Sons, & Co., Ld.
Rouen, 2 ck.

Copper Oxide—
Antwerp, 5 cs.

Cream of Tartar—
Rotterdam, 20 cks.
" 20 kgs. Wilson, Sons, & Co. Ld.

Dextrine—
Hamburg, 100 bgs.

Dyestuffs (*otherwise undescribed*)
New York, 36 bdls.

Farina—
Rotterdam, 1,020 bgs.
" 30 Wilson, Sons, & Co., Ld.
Stettin, 1,150 Browne, Geveke & Co.
" 230

Glucose—
New York, 200 brls.
Rotterdam, 10 cks. Wilson, Sons, & Co., Ld.
Stettin, 15 / 1,200 bgs.

Glue—
Antwerp, 7 cks.
Rotterdam, 10 bgs. Wilson, Sons, & Co., Ld.
Rouen, 25 cks. 20 bls.
Stettin, 100 bgs.

Indigo—
Rotterdam, 18 chts.
" 2 sheets Wilson, Sons, & Co., Ld.

Limestone—
Antwerp, 6 crts.

Litharge—
Rotterdam, 31 cks. Wilson, Sons, & Co., Ld.

Lithopone—
Hamburg, 40 cks.

Ochre—
Rotterdam, 70 bgs. / 13 cks.

Paraffin Scale—
New York, 742 brls.

Pitch—
Hamburg, 9 brls.

Potash—
Hamburg, 36 cks.
Treport, 4 cs. 21 dms.

Rosin—
New York, 1,500 brls.
Savannah, 4,230

Size—
Rotterdam, 10 cs.

Soap—
Rotterdam, 5 bgs. Wilson, 5 cs. Sons, & Co., Ld.

Sodium Nitrate—
Rotterdam, 25 cks. Wilson, Sons, & Co., Ld.

Sodium Phosphate—
Antwerp, 21 cks.

Sodium Sulphate—
Rotterdam, 3 brls. Wilson, Sons, & Co., Ld.

Starch—
Hamburg, 50 cks. / 120 cs.
New York, 400 bgs.
Rotterdam, 266
" 115 Wilson, Sons, & Co., Ld.

Stearine—
Rotterdam, 21 bls.
" 14 Wilson, Sons, & Co., Ld.

Tallow—
New York, 100 hds.

Tannic Acid—
Hamburg, 5 cks.

Tannin—
Rotterdam, 10 brls. Wilson, Sons, & Co., Ld.
" 5

Tartaric Acid—
Rotterdam, 10 cks. 20 kgs

Tin Chloride—
Antwerp, 10 cks.

Toluidine—
Hamburg, 4 cks.

Varnish—
New York, 4 brls.

Waste Salt—
Hamburg, qty.

Wood Pulp—
Christiania, 1,375 bls.
Drammen, 3,560
Gothenburg, 3,509
Hamburg, 410
Rotterdam, 102 rolls — Wilson, Sons, & Co., Ld.
Skien, 4,280 bls.
Stettin, 320 pks.

Zinc Oxide—
Rotterdam, 16 brls.

Zinc Sulphate—
Rotterdam, 6 cks.

Zinc White—
Rotterdam, 1 ck.

HULL.

Week ending September 3rd.

Aluminium—
New York, 6 cs. — Wilson, Sons, & Co., Ld.

Ammonia—
Rotterdam, 84 bgs. — Hull & Netherlands S. S. Co.

Antimony—
Hamburg, 5 cs.

Barytes—
Amsterdam, 19 cks. — Hull & Netherlands S. S. Co.
Antwerp, 68 — Bailey & Leetham, Ld.
" 50 bgs. — H. F. Pudsey
" 74 cks. — Wilson,
" 66 — Sons, & Co., Ld.
Bremen, 135 pks.

Bone Meal—
Kurrachee, 8,000 bgs.

Castor Oil—
Trieste, 10 cs. — Wilson, Sons, & Co., Ld.

Chemicals *(otherwise unaescribed)*
Antwerp, 90 dms. — Wilson, Sons, & Co., Ld.
Hamburg, 6 pks. — "
" 1 ck. —
Rotterdam, 1 tin — Veltmann & Co.

Colours—
Antwerp, 4 cks. — Bailey & Leetham, Ld.
" 2 — Wilson,
" 10 pks. — Sons, & Co., Ld.
Bremen, 1 cs. — Veltmann & Co.
" 7 — J. Pyefinch & Co.
Christiania, 8 cks. — Wilson, Sons, & Co., Ld.
Ghent, 18 — "
Hamburg, 2 — "
Rotterdam, 11 — "
" 1 cs. —
" 25 cks. — Hull & Netherlands S. S. Co.
" 19 cs. —
Venice, 3 — Wilson, Sons, & Co., Ld.

Cream of Tartar—
Rotterdam, 2 cks. — Hull & Netherlands S. S. Co.

Cryolite—
Copenhagen, 1 ck. — Wilson, Sons, & Co , Ld.

Dyestuffs—
Alizarine
Rotterdam, 26 cks. — Hull & Netherlands S. S. Co.
Extracts
Fiume, 100 brls.
Fustic
Trieste, 10 t. — Wilson, Sons, & Co., Ld.
Myrabolams
Bombay, 650 bgs.
Shumac
Palermo, 1,258 bgs. — Wilson, Sons, & Co., Ld.
" 1,580
Trieste, 10 brls. —
30 bgs. — Sons, & Co., Ld

Dyestuffs *(otherwise unes.)*—
Antwerp, 175 bgs. — Wilson, Sons, & Co., Ld.
Hamburg, 75 — "

Farina—
Harlingen, 20 bls. — Hull & Netherlands S. S. Co.

Glucose—
Hamburg, 10 cks. — Wilson, Sons, & Co., Ld.
New York, 50 brls. —
Rotterdam, 120 bgs. — Hull & Netherlands S. S. Co.

Glue—
Christiansund, 1 brl. — Wilson, Sons, & Co., Ld.
Dunkirk, 10 bgs. —
Rotterdam, 1 cs. — Hull & Netherlands S. S. Co.

Glue Stock—
Ghent, 215 bgs. — Wilson, Sons, & Co., Ld.

Limestone—
Antwerp, 1 crt. — Bailey & Leetham, Ld.

Lithopone—
Rotterdam, 28 cks. — Hull & Netherlands S. S Co.

Mineral White—
Fiume, 100 bgs. — Wilson, Sons, & Co., Ld.

Ochre—
Bremen, 2 cks. — E. V Day
" 1 — Veltmann & Co.

Pitch—
Copenhagen, 50 brls. — Wilson, Sons, & Co., Ld.
Rotterdam, 60 cks. — H. F. Pudsey

Potash—
Dunkirk, 90 dms. — Wilson, Sons, & Co., Ld.
Hamburg, 20 cks.

Pumice Stone—
Messina, 232 pks. 6 cs.

Size—
Rotterdam, 10 cs. — Hull & Netherlands S S. Co.

Soap—
Boston, 6 cs. — Wilson, Sons, & Co., Ld.
New York, 4 brls. —

Soda—
Antwerp, 100 bgs. — Bailey & Leetham Ld.
" 100 — Wilson, Sons, & Co., Ld.
Ghent, 353 —

Starch—
Antwerp, 20 cs. — Bailey & Leetham, Ld.
" 140 —
" 80 — Wilson, Sons, & Co., Ld.
Bremen, 3,653 — Veltmann & Co.
Ghent, 261 cs. — Wilson, Sons, & Co., Ld.
New York, 98 bgs.

Sulphur—
Catania, 100 pks. — Wilson, Sons, & Co., Ld.
" 673
" 100 t.

Tallow—
Antwerp, 31 pks. — Wilson, Sons, & Co., Ld.
Dunkirk, 138 cks. —
Hamburg, 100 tcs. —
New York, 300 —

Tar—
Konigsberg, 100 brls.

Tartar—
Bordeaux, 5 cks. —
Rotterdam, 1 — Hull & Netherlands S. S. Co

Tartaric Acid—
Hamburg, 8 cks. — Bailey & Leetham, Ld.
Rotterdam, 2 — Hull & Netherlands S. S. Co.
10 cs.

Ultramarine—
Bremen, 4 cks —
Rotterdam, 1 — Hull & Netherlands S. S Co

Varnish —
Antwerp, 2 cs.

White Lead—
Amsterdam, 55 cks. — Hull & Netherlands S. S. Co.
Rotterdam, 31 —

Wood Pulp—
Antwerp, 1 ble. — Wilson, Sons & Co., Ld.
Bergen, 19 pks. —
Boston, 225 bdls. —
Christiania, 2,796 bls. —
Drontheim, 200 —
Trieste, 300 —

GLASGOW.

Week ending September 8th.

Acetic Acid—
Rotterdam, 7 cks. — J. Rankine & Son

Barium Sulphate—
Antwerp, 200 bgs. 36 cks.

Barytes—
Rotterdam, 7 cks. — J. Rankine & Son

Bleaching Powder—
Hamburg, 90 cks.

Castor Oil—
Antwerp, 139 cks.

Colours—
Rotterdam, 188 pks. — J. Rankine & Son
Hamburg, 1 ck. 1 cs.

Dyestuffs—
Alizarine
Rotterdam, 37 cks. — J. Rankine & Son
Aniline Colours
Amsterdam, 1 ck.
Hamburg, 3 cs.
Cutch
Rangoon, 460 bxs. — P. Henderson & Co.
Extracts
Antwerp, 25 cks.

Glucose—
Boston, 150 brls.

Glue—
Antwerp, 5 cks.

Ochre—
Rotterdam, 2 cks. — J. Rankine & Son

Paint—
Montreal, 1 ck.

Paraffin Wax—
Rangoon, 809 bxs. — P. Henderson & Co.

Potash—
Rotterdam, 90 cks. — J. Rankine & Son
Hamburg, 61 dms.

Rosin—
Baltimore, 500 brls.

Sodium Sulphate—
Antwerp, 17 cks.

Starch—
Antwerp, 1 ck. 265 cs.
Rotterdam, 15 cs. — J. Rankine & Son

Tartaric Acid—
Antwerp, 12 cks.

Varnish—
Antwerp, 3 cks. 1 cs.

Waste Salt—
Hamburg, 1,015 bgs.

White Lead—
Rotterdam, 52 pks. — J. Rankine & Son

Wood Pulp—
Gefle, 4,318 bls. — Henderson, Craig & Co., Ld.
Boston, 180
Hamburg, 77
Christiania, 1,264 bls. 95 cs.

Zinc Oxide—
Antwerp, 21 cks.
Rotterdam, 35 — J. Rankine & Son
Hamburg, 15

TYNE.

Week ending September 3rd.

Antimony Ore—
Hamburg, 147 bgs. — Tyne S. S. Co.

Barytes—
Antwerp, 450 bgs. — Tyne S. S. Co.
Rotterdam, 104 cks. — "
230 bgs. —

Colours—
Antwerp, 1 ck. — Tyne S. S. Co.
Hamburg, 2 —
Rotterdam, 1 —

Dyestuffs *(otherwise undescribed)*
Rotterdam, 1 bg. — Tyne S. S. Co.

Limestone—
Antwerp, 17 crts. — Tyne S. S. Co.

Manganese—
Hamburg, 10 cs — Tyne S. S. Co.

Phosphates—
Antwerp, 370 t. — Langdale's Chemical M. Co.
Pt. Royal, 2,751

Soap—
Copenhagen, 1 cs. —
Rotterdam, 6 brls. — Tyne S. S. Co.
4 cs.

Starch—
Antwerp, 80 cs. — Tyne S. [redacted] S. Co.
Rotterdam, 240 —

Varnish—
Antwerp, 4 brls. — Tyne S. [redacted] S. Co.

White Lead—
Antwerp, 7 cks. — Tyne S. [redacted] S. Co.

Wood Pulp—
Christiania, 2,640 bls.

Zinc Oxide—
Antwerp, 5 brls. — Tyne S. [redacted] S. Co.
Rotterdam, 2 cks. —

GOOLE.

Week ending August 31st.

Alizarine—
Rotterdam, 94 cks. 4 cs.

Aniline—
Rotterdam, 393 cks. 65 cs.

Antimony—
Boulogne, 14 cks.

Barytes—
Antwerp, 53 cks.

Caoutchouc—
Boulogne, 8 cks.

Colours—
Hamburg, 1 ck. 225 cs.

Dyestuffs *(otherwise unaescribed)*
Boulogne, 84 cks. 3 cs.

Farina—
Delfszybl, 200 bgs.
Hamburg, 100

Glucose—
Calais, 200 bgs.

Glue—
Boulogne, 1 ck.
Hamburg, 2 bgs.
Rotterdam, 2

Indigo—
Rotterdam, 2 brls.

Logwood—
Belize, 485 t.

Phosphates—
Calais, 10 bgs.
Dunkirk, 800

Pitch—
Amsterdam, 49 cks.

Plumbago—
Boulogne, 1 ck.

Potash—
Calais, 20 dm[redacted]s.
Dunkirk, 6 cks.

Saltpetre—
Hamburg, 3 cks.
Rotterdam, 170 bgs.

Sodium Silicate—
Rotterdam, 1 ck.

Starch—
Ghent, 48 cs.

Tartar—
Dunkirk, 10 bgs.

Waste Salt—
Hamburg, 1,379 cks.
140 t.

Wood Pulp—
Rotterdam, 54 bls.

GRIMSBY.

Week ending September 3rd.

Barytes—
Hamburg, 20 cks.

Caoutchouc—
Hamburg, 1 ck.

Chemicals *(otherwise undescribed)*
Antwerp, 2 pks.
Hamburg, 15 cks. 2 cs. 10 crbys.

Colours—
Antwerp, 13 cks. 46 pks.
Hamburg, 41 9 cs.
Rotterdam, 2 6 59

Dyestuffs *(otherwise undescribed)*
Dieppe, 5 cks.

Plumbago—
Hamburg, 1 ck.

Size—
Antwerp, 2 pks.

Starch—
Antwerp, 120 cs.

Varnish—
Antwerp, 2 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
Week ending September 7th.

Acids—
Durban, 22 pks. £28
St. Petersburg, 10 kgs. 24
Ammonia—
Libau, 6 cs. £50
Sydney, 50 cyldrs. 180
Antwerp, 36 155
Calcutta, 17 14
Ammonium Carbonate—
Adelaide, 13 c. £20
Cologne, 17 20
Ammonium Sulphate—
Hamburg, 127 t. £1,269
Stettin, 205 6 c. 2,200
Rouen, 19 15 220
Bremen, 817 2,268
Arsenic—
Cape Town, 3 dms. £4
Borax—
Sydney, 1 t. 2 c. £18
Rio de Janeiro, 8 23
Carbonic Acid Gas—
Channel Is., 61 tubes £23
Caustic Potash—
Wellington, 16 c. £18
Caustic Soda—
Durban, 4 c. £9
Lyttelton, 6t. 11 47
Wellington, 5 5
Chemicals *(otherwise undescribed)*
Madras, 22 kgs. 4 cs. £40
Calcutta, 10 14
Dunkirk, 15 cks. 225
Treport, 14 65
Rotterdam, 25 kgs. 147
Amsterdam, 8 40
Gothenburg, 25 cks. 20
Cologne, 17 38
Hamburg, 10 32 pks. 201
Adelaide, 2 cs. 8 44
Sydney, 18 187
B Ayres, 6 brls. 29
Melbourne, 24 (pt.)13
Durban, 11 cs. 20
Perth, 50 (pt.)69
Genoa, 10 kgs. 55
Antwerp, 10 57
Demerara, 125 33
Citric Acid—
Pt. Elizabeth, 1 c. £6
Amsterdam, 19 113
Brussels, 10 56
E. London, 1 7
St. Petersburg, 3 cks. 101
Cape Town, 1 7
Adelaide, 2 13
Gympie, 1 7
Brisbane, 4 26
Perth, 2 13
Wellington, 8 53
Suva, 1 7
Odessa, 5 27
Melbourne, 10 65
Stockholm, 1 t. 113
Coal Products—
Aniline
Christchurch, 1 cs. £5
New York, 25 dms.660
Anthracene
Rotterdam, 310 cks. £872
Cologne, 110 400
Carbolic Acid
Rio de Janeiro, 5 cs. £6
Fremantle, 2 7
Melbourne, 50 dms. 80
Boston, 20 cks. 153
Antwerp, 9 pks. 26
Calcutta, 2 5
Creosote
New York, 200 cks. £136
Brest, 676 460
Dyes
Lyttelton, 6 pks. £120
Naphtha
Auckland, 20 dms. £12
Naphthaline
Shanghai, 25 cks. £60
Pt. Elizabeth, 25 39
Pitch
Alexandria, 150 brls. £41
St. John, N.B., 261 cks. 150
Bombay, 2 6
Tar
Durban, 100 dms. £12
Hamburg, 250 brls. 108
Broome, W.A. 20 3
Stettin, 150 74
Pt. Elizabeth, 75 8
Coal Products *(otherwise undes.)*—
Brisbane, 100 dms. £23
Copper Sulphate—
Canterbury, 1 t. £16
Cream of Tartar—
Brisbane, 3 c. £13
Fremantle, 10 38
Lyttelton, 9 35
Disinfectants—
Halifax, 9 cs. £16
New York, 71 pks. 270
Pt. Elizabeth, 16 30
Colombo, 3 cks. 21
Cape Town, 22 42
Hamburg, 34 14
Bombay, 25 13
Berbice, 2 13
Hydrochloric Acid—
Demerara, 1 t. 13 c. £11
Cape Town, 12 cs. 9
Manure—
Dunkirk, 4 t. 13 c. £32
Hamburg, 15 70
St. John, N.B., 415 1,109
Treport, 50 130
Bordeaux, 9 19 35
Rouen, 243 775
Nitric Acid—
Channel Is., 49 carbys £80
Phosphoric Acid—
Demerara, 10 t. 3 c. £136
Phosphorus—
Dunedin, 10 cs. £80
Potash—
Brussels, 10 c. £80
New York, 1 t. 6 84
Wellington, 1 8 46
Potassium Cyanide—
Pt. Elizabeth, 1 t. 10 c. £171
Sydney, 10 4 936
Melbourne, 14 2 1,198
E. London, 10 cs. 30
Townsville, 11 1,232
Potassium Prussiate—
Antwerp, 10 c. £56
New York, 20 cks. 336
Salt Cake—
Antwerp 135 t. £236
Saltpetre—
Hamburg, 2 t. 15 c £57
Sydney, 10 10
Dunedin, 10 11
Salicylic Acid—
Melbourne, 2 c. £21
Sheep Dip—
Dunedin, 22 t. 11 c. £125
Bluff 11 16 325
Cape Town, 100 cs. 830 pks. 344
Soda—
Singapore, 1 t. 9 c. £6
Rome, 1 2 7
Sydney, 6 9
Soda Ash—
Lyttelton, 5 t. 10 c. £21
Soda Crystals—
Chefoo, 1 t. 13 c. £5
Aden, 1 2 66
Cape Town, 6 10 23
Sodium Silicate—
Durban, 6 t. 7 c. £25
Sodium Sulphate—
Ghent, 50 t. £75
Sulphur—
Cape Town, 11 t. 3 c. £95
Pt. Elizabeth, 60 kgs. 26
Sulphuric Acid—
Hamburg, 15 cs. £10
Superphosphates—
Auckland 50 t. £140
Tartaric Acid—
Adelaide, 2 c. £13
Auckland, 5 28
Melbourne, 10 68

LIVERPOOL.
Week ending September 7th.

Acetic Acid—
Lisbon, 17 c. £6
Alkali—
E. London, 5 t. 2 c. 1 q. £21
Genoa, 75 300
Symrna, 64 4 249
B. Ayres, 11 16 52
Oporto, 4 3 2 18
Iquique, 16 3 2 64
Gothenburg, 4 9 2 18
Syra, 4 13 1 20
Philadelphia, 10 8 1 43
Malta, 4 17 3
Valencia, 21 7 2 101
Catania, 1 6 6
Marseilles, 10 2 2 41
Alum—
Smyrna, 3 t. 11 c. 3 q. £20
Tripoli, 2 10
Ibrail, 1 10 8
Melbourne, 1 10 8
Smyrna, 1 3 1 6
Bourgas, 6 8 3 30
Anhydrous Ammonia—
Gibraltar, 12 c. £19
Las Palmas, 7 73
Pt. Said, 14 60
Ammonium Carbonate—
Hamburg, 2 t. £68
New York, 6 c. 8
Copenhagen, 10 9
Venice, 20 cks. 22
Halifax, 5 7
Montreal, 15 3 q. 21
Genoa, 30 kgs. 18 66
B. Ayres, 19 3 27
Ammonium Chloride—
New York, 9 t. 17 c. £261
Bombay, 10 20
Tripoli, 10 15
Trieste, 1 30
Philadelphia, 5 6 2 q. 176
Beyrout, 1 4 39
Alexandria, 1 33
Ammonium Sulphate—
Sourabaya, 25 t. £237
Samarang, 111 6 c. 3 q 994
Leghorn, 30 19 290
Gd. Canary, 22 19 235
Valencia, 60 550
Genoa, 1 10 15
Lisbon, 9 98
Teneriffe, 10 105
Nantes, 1 4 12
Las Palmas, 30 3 346
Arsenic—
Pt. Natal, 18 c. 3 q. £15
Rouen, 1 t. 1 1 20
Vera Cruz, 7 3 7
Nantes, 2 2 3 40
Basic Slag—
Palermo, 102 bgs. £12
Bleaching Powder—
Baltimore, 25 cks.
Bilbao, 20
Bombay, 15 cs.
Boston, 233
Genoa, 61
Ghent, 27
Lisbon, 36
Montreal, 140
Naples, 15
Newport News, 223
New York, 35
Philadelphia, 213
Rouen, 5
Tampico, 9 brls.
Vera Cruz, 21
Bone Ash—
Marseilles, 6 t. £92
Boracic Acid—
New York, 12 c. 1 q. £19
Wellington (N.Z.), 1 t. 30
Perth, 10 15
Adelaide, 10 15
Hamburg, 6 18 173
Halifax, 4 3 6
Borax—
New York, 1 t. 2 c. £15
Stockholm, 5 14 74
Perth, 1 17
Adelaide, 1 16
Hamburg, 7 12 110
Constantinople, 10 6
Bombay, 5 5
Montreal, 2 4 77
Alexandria, 11 7
Halifax, 16 3 q. 11
Stamboul, 10 6
Coquimbo, 5 5
Calcium Chloride—
Rouen, 10 t. £22
Carbolic Acid—
Rouen, 5 t. 14 c. 3 q. £47
Hamburg, 9 3 33
Valparaiso, 1 6
Caustic Potash—
Adelaide, 2 c. £3
Barcelona. 13 16
Caustic Soda—
Adelaide, 86 dms.
Alicante, 10
Antwerp, 35
Barbadoes, 65 pks.
Barcelona, 2
Bari, 139
Bombay, 31
B. Ayres, 60
Catania, 30
Cartagena (Sp.). 30
Galatz, 60
Gefle, 10
Genoa, 220
Hamburg, 14
Hiogo, 511
Kansas, 50
Kingston (Jam.) 8
Leghorn, 17
Limassol, 10
Malaga, 76
Malta, 27
Melbourne, 115
Messina, 35
Montreal, 26 cks.
Naples, 327
Newcastle, 70
New York. 75
Paris, 32
Penang, 5
Piræus, 18
Pt. Natal, 65 cs.
Punta Arenas, 19
Riga, 35
Rio de Janeiro, 20
Rio G. do. Sul 80
Rotterdam, 37
Rouen, 11
San Francisco, 70
Sfax, 25
Smyrna, 10
Sydney, 15
Tampico, 75
Tarragona, 10
Valencia, 50 brls.
Wellington, 46
Yokohama, 100
Chemicals *(otherwise undescribed)*
Calcutta, 15 t. 12 c. 3q £278
50 brls.
Bombay, 25 118
Valparaiso, 1 5
Volo, 1 ck. 8
Santo Cuaranto, 1 6
Brisbane, 5 15
Madras, 5 24
Smyrna, 2 8
Montreal, 3 t. 14 c. 3 20
Melbourne, 7 100
Rosario, 5 70
Danzig, 8 1 6
B. Ayres, 2 10 35
Piræus, 10 7
Coquimbo, 6 5
Philadelphia, 26 9 715
China Clay—
Baltimore, 406 cks.
Barcelona, 10
Bilbao, 100 bgs.
Bombay, 150 cks.
Boston, 2,540
Calcutta, 460
Merriton, 150
Philadelphia, 10,62
Rio de Janeiro, 72
Citric Acid—
Vera Cruz, 3 c. £20
Honolulu, 13 28
Coal Products—
Aniline Oil
E. St. Louis, 20 dms.
Aniline Salts
Mersyne, 5 cks.
Tampico, 4
Dyes
Bombay, 2 cks.
Rio de Janeiro, 1 cs.
Naphthol
Milan, 4 cks.
Pitch
Rotterdam, 60 brls.
Tar
Lagos, 5 brls.
Philadelphia, 100
Copperas—
Sourabaya, 3 t. £10
Tripoli, 5 3 c. 2 q. 14
Halifax (N.S.), 2 10 2 5

Copper Sulphate—
Rouen, 50 t. 2 c. £843
Catania, 5 81
Piræus, 1 3 3 q. 19
M. Video, 4 6 1 70
Braila, 4 66
Rio de Janeiro, 5 2 5
Samarang, 3 50
New Fairwater, 1 19 30
Genoa, 6 99
Calcutta, 2 32
Nantes, 5 17 2 100
Halifax, 3 1 3
Ancona, 10 2 158
Melbourne, 5 81

Cream of Tartar—
Rio de Janeiro, 2 c. £9

Disinfectants—
New York, 5 c. £7
Montreal, 5 2 q. £10
Toronto, 2 t. 5
Rio de Janeiro, 10 2 18

Dyestuffs—
Aniline Colours
Rouen, 1 cs.
Extracts
Barcelona, 10 cks.
Boston, 115 25 brls.
St. Mary's, 5
Toronto, 1
Logwood
Lisbon, 100 bgs.
Marysville, 5 cks.

Glycerine—
Lisbon, 4 t. 16 c. £160
Montreal, 4 15 3 q. 195
Rotterdam, 4 14 1 197
Valparaiso, 2 7
Montreal, 2 1 97
Yokohama, 14 10 570
Leghorn, 1 1 1 42
Antwerp, 11 1 20

Lead Acetate—
New York, 5 c. 1 q. £6
Havana, 1 t. 1 1 26
Vera Cruz, 6 2 8

Lead Nitrate—
Vera Cruz, 5 c. £5

Magnesia—
Montreal, 6 cs.
New York, 50
Rouen, 30
Salonica, 3 tcs.
Genoa, 12 cks.

Magnesium Chloride—
Rangoon, 8 t. 4 c. £38
Rouen, 5 2 3 q. 12

Magnesium Sulphate—
B. Ayres, 45 brls.

Manure—
Malaga, 30 t. 1 c. £212
Santa Cruz, 34 340
Las Palmas, 12 94
Gd. Canary, 55 4 398
La Pallice, 127 1 1 q. 635
Genoa, 98 9 3 465

Oxalic Acid—
Boston, 16 t. 5 c. 1 c. £446

Paint—
Accra, 5 dms.
Antwerp, 53 pks.
Belize, 5 cks. 19 kgs.
Benguella, 2 brls.
Boca, 3 6 cs.
B. Ayres, 10 18 13 dms.
Buguma, 8
Cabenda, 30 kgs.
Calcutta, 6 cks.
Callao, 5
Constantinople, 5 brls.
Hamburg, 39 kgs.
Havre, 8 pks.
Hong Kong, 190 dms.
Madras, 40
N. Orleans, 48 pks.
New York, 1 ck. 1 cs.
Paita, 14
Para, 2 cks.
Punta Arenas, 12 kgs.
Rangoon, 44 dms.
St. John's, 376 2 cks.
Sandy Point, 3 cks.
Sierra Leone, 40 kgs.
Talcahuano, 3 cks.
Valparaiso, 20

Painters' Colours—
Alexandria, 65 kgs. 1 ck
Algoa Bay, 30 cks.
Amboma, 75 kgs.
Boca, 50 2 bls.
Boma, 3 cs.
Bombay, 193 pks.
B. Ayres, 48 cks. 80 brls. 130 cs.
Calcutta, 278
Callao, 40 cs.
Durango, 2 brls.
Elmina, 5
Hong Kong, 132 pks.
Karachi, 125 kgs.
Lagos, 10 dms.
Maracaibo, 110 pks.
Maranham, 15 cks.
Melbourne, 22
New York, 7 cs. 8
Para, 55 cks. 10 kgs. 8 brls.
Penang, 4
Pernambuco, 60 10
Philadelphia, 5
St. John's, 8 pks.
Samarang, 165
Sydney, 32 cs.
Toronto, 1 kg. 6 brls.

Paraffin Wax—
Larnaca, 5 cks.
Palermo, 10 bgs.
Sourabaya, 35 dms.

Phosphates—
Hamburg, 510 t. £1 000
Nantes, 36 140

Phosphorus—
Hiogo, 4 t. 10 c. £850
Shanghai, 18 146
Tampico, 5 46
Yokohama, 1 2 240

Potashes—
B. Ayres, 5 c. £5

Potassium Bichromate—
Lisbon, 2 t. 1 c. 2 q. £68
Montreal, 1 14 3 57
Piræus, 10 17
Rouen, 5 6 3 175
Salonica, 2 2 66
Vera Cruz, 1 5 3 43

Potassium Carbonate—
New York, 18 t. 19 c. £320
Rio de Janeiro, 16 14
Syra, 8 10

Potassium Chlorate—
Boston, 5 t. £145
Gutujewski, 7 10 c. 225
Kalmar, 1 30
Hamburg, 9 270
New York, 5 8 138
Rio de Janeiro, 5 150
Rotterdam, 10 15
St. Petersburg, 150 4,381
Stockholm, 5 150
Vera Cruz, 10 15

Potassium Prussiate—
Genoa, 20 cks. £233
Vera Cruz, 13 c. 39

Potassium Stannate—
Bombay, 19 c. 2 q. £56

Salt—
Antwerp, 295 t.
Bakana, 40
Banana, 16
Baltimore, 7
Batanga, 19 13 c.
Belize, 22 6
Berlin, 16 3
Boston, 300 bgs. 3,957 sks.
B. Ayres, { 90 t. 10 / 300 cs.
Calcutta, 3,636 150
Camercons, 33 14 c.
Cape Town, 166
Chicago, 140
Egwanga, 20
Fuca, 10
Ghent, 55
Hiogo, 20
Lagos, 50
Limon, 10
Landana, 75
Lisbon, 20
Lyttelton,
M. Video, 8 6
Montreal, 915 6
Newcastle, 244
N. Orleans, 1,030
New York, 2,300 bgs. 850
Norrkoping, 300
Pt. Natal, { 112 / 336 t.
Quebec, 7,500 cks.
Rangoon, 2,470 t.
Rosario, 100 cs.
St. John's, 15
Salt Pond, 500 bgs.
San Juan, 75
Sapeli, 300
Sette Cama, 200
Stockholm, 700
Sydney, 1,870 100 tcs.
Wellington, 100
Yokohama, 100 cs.

Salt Cake—
Antwerp, 251 t. £314
Baltimore, 100 6 c. 162
Delagoa Bay, 5 1 13

Saltpetre—
Maceio, 1 t. 4 c. 2 q. £25
San Francisco, 4 10 92
Syra, 2 2 41
Vera Cruz, 9 9

Satinite—
Copenhagen, 5 t. 7 c. 1 q. £18

Sheep Dip—
Bahia Blanca, 11 t. 7 c. 2 q. £185
B. Ayres, 119 3,650
Halifax, 2 cks. 10
M. Video, 3 t. 5 3 38
Punta Arenas, 2 5 70

Soap—
Abonnema, 112 bxs.
Alexandria, 50
Anamaboe, 50
Antwerp, 200
Appam, 50
Arrecife, 25
Assinee, 115
Attaboe. 30
Bahia Blanca, 150 cs.
Barbadoes, 250
Belize, 450
Berne, 130
Bombay, 1,065 30
Calcutta, 13
Cameroons, 50
Cartagena, 12
Ceuta, 11
Colombo, 70
Constantinople, 10 brls.
Curacao, 310 cs.
Demerara, 200
Durban, 525 pks.
E. London, 501
Gibraltar. 125
Guadeloupe, 500 bdls.
Hamilton, 190
Hong Kong, 1
Hulk, 9
Iquique, 20
Iquitos, 1,000
Kingston, Ja., 1,379
La Guayra, 1
La Plata, 10
Las Palmas, 1,211
Larnaca, 1
Montreal, 15
New York, 90
Palermo, 1
Palma, 250
Para, 100
Paramaribo, 50
Pt. Elizabeth, 10 skl.-cs.
Pt. Natal, 5 cs.
Pt. Said, 30
Puerto Cortes, 50
Punta Arenas, 9
Punta Delgado, 10
Quebec, 1
Rangoon, 700 14
Rouen, 75
St. Gall, 501
St. John's, 668 5
San Juan, 56
Sette Cama, 25
Sierra Leone, 42
Stamboul, 240 25
Teneriffe, 350
Valparaiso, 100
Vera Cruz, 1
Volo. 10
Zanzibar, 250 bdls.
Zurich, 260

Soda—
Hamburg, 2,671 kgs.
Montreal, 250 pks.
Vera Cruz, 25 dms.

Soda Ash—
Abo, 7 cks.
Adelaide, 42
Baltimore, 15
Bilbao, 40 bgs.
Boston, 800 71
B. Ayres, { 40 brls. / 92
Calcutta, 50 kgs. 75
Christchurch, 47
Fairwater, 980 bgs.
Genoa, 100
Greytown, 7
Hamburg, 77
Lisbon, 200
Maranham, 65
Melbourne, 112
N'fairwater, 1,004
New York, 160 79 tcs.
Philadelphia, 400 45
Rio G. do Sul, 190
Rio de Janeiro, 125
Rotterdam, 42 pks.
Santos, 12 cks.
Sherbrooke, 107
Smyrna, 250
Stettin, 600
Sydney, 231
Venice, 120 kgs. 41
Vera Cruz, 33
Waterloo, 20 bgs.
Wellington, 41
Wyborg, 7
Zante, 40 brls.

Soda Crystals—
Calcutta, 30 brls.
Gutujewski, 25 cks.
Halifax, 82 pks.
New York, 56
Penang, 10 cks.
Windsor, 100 kgs.

Sodium Acetate—
Vera Cruz, 2 cks.

Sodium Arseniate—
Antwerp, 3 cks.

Sodium Bicarbonate—
Antofagasta, 45 kgs.
Antwerp, 115 8 cks.
Barcelona, 4
Bordeaux, 311
Calcutta, 1,375
Colombo, 6
Dunedin, 200
Dunkirk, 7
Genoa, 89
Ghent, 10
Halifax, 44 pks.
Hamburg, 201
Havre, 94 dms.
Ibrail, 20
Lisbon, 100
Madras, 100
Marseilles, 297
Melbourne, 376
M. Video, 105 pks.
Montreal, { 40 bgs. / 150 kgs.
Naples, 95
Quebec, 75 dms.
Rangoon, 5 4 cks.
Rouen, 75 cs.
Sydney, 680
Valencia, 105 4
Wellington, 105
Windsor, 75

Sodium Bichromate—
Lisbon, 5 cks.

Sodium Chlorate—
Gutujewski, 200 kgs.
New York, 1

Sodium Hyposulphite—
Piræus, 10 dms.

Sodium Sulphide—
Constantinople, 6 t.

Starch—
Lisbon, 2 cks.
St. Nazaire, 4 hds.

Strontia—
Hamburg, 50 t. 10 c.

Sulphur—
Boston, 125 t. 5 c.
Iquitos, 10
Konigsberg, 2 11
Punta Delgada, 13

Sulphuric Acid—
Kingston, 1 t. 4 c.
Madras, 112 glns.
Pernambuco, 16
Rio de Janeiro, 1 t. 15

Superphosphates—
Genoa, 116 t. 4 c. 1 q.
Gd. Canary, 5
La Pallice, 375
Rostock, 850
Valencia, 65

Tartar Emetic—
Vera Cruz, 5 c. 2 q.

Tartaric Acid—
Antofagasta, 2 c 1 q.
Valparaiso, 1

Varnish—
Alexandria, 3 brls.
Antwerp, 16 cks.
Benguella, 2 cs.
Bourgas, 1
B. Ayres, 2
Callao, 4
Cape Town, 12
Naples, 3

White Lead—
Boma, 12 kgs.

Zinc Chloride—
Bombay, 7 t. 9 c. 2 q. £115
Zinc Crystals—
Bilbao, 2 t. 5 c. 2 q. £35

MANCHESTER.

Week ending September 7th.

Ammonium Chloride—
Alexandria, 6 cks.
Aniline Colours —
Germany, 1 ck. 7 kgs.
Bleaching Powder—
Montreal, 103 cks.
Castor Oil—
Germany, 3 cs.
Chemicals (*otherwise undescribed*)
Alexandria, 150 brls.
Rotterdam, 13 cks. 5 cs. 2 kgs.
Coal Products—
Aniline Oil
Germany, 13 dms.
Aniline Salts
Russia. 28 cks.
Naphthylamine
Germany, 28 cks.
Pitch
Alexandria, 100 brls.
Cette, 850 t. 13 c.
Toluol
Germany, 37 dms.
Colours—
Larnaca, 11 kgs.
Copperas—
Mersyne, 50 brls.
Farina—
Holland 40 sks.
Fustic—
Montreal, 6 cks.
Toronto, { 10 / 25 bgs.
Linseed Oil—
Alexandria, 15 brls.
Beyrout, 11
Paint —
Beyrout, { 80 kgs 56 dms. / 7 brls.
Jaffa, 7 cks.
Tripoli, S., 45 kgs.
Painters' Colours—
Jaffa, 8 cs. 10 brls.
Soda Ash —
Lattakia, 40 cks.
Turpentine—
Alexandria, 5 dms.
Beyrout, 2 brls. 10
Whiting—
Beyrout, 10 brls.
Jaffa, 5
Larnaca, 1 ck

HULL.

Week ending September 3rd.

Ammonium Sulphate—
Kurrachee, 6 brls.
Stettin, 489 bgs.
Bleaching Powder—
Odessa, 17 cks.
Chemicals (*otherwise undescribed*)
Amsterdam, 48 cks.
Bombay, 18
Bremen, 1 cs.
Christiania, 10 4
Copenhagen, 2
Drontheim, 10
Gothenburg, { 23 55 11 pks. / 188 slbs.
Ghent, 4
Hamburg, 10
Rotterdam, 1 30
Stockholm, 2
Cottonseed Oil—
Amsterdam, 110 c.
Copenhagen, 18
Gothenburg, 50
Hamburg, 732
Harlingen, 171
Konigsberg, 53
Rotterdam, 543
Stockholm, 6
Dyestuffs (*otherwise undes.*)—
Boston, 4 cks.
Danzig, 2 cs.
Ghent, 25
Gothenburg, 1
Hamburg, 1
Glue—
Abo, 5 cks.
Hamburg, 5 bgs.
Linseed Oil—
Bergen, 10 c.
Christiania, 302
Christiansand, 65
Copenhagen, 69
Constantinople, 54
Drontheim, 36
Rotterdam, 88
Manure —
Dunkirk, 1,601 bgs. 1,300 sks.
Mineral White—
Gothenburg, 50 bgs.
Ochre—
Hamburg, 10 cks.
Paint—
Abo, 1 cs.
Painters' Colours—
Antwerp, { 152 cks. 2 pks. / 41 dms.
Bergen, 2 cs. 70
Bombay, 33 58 224 pks.
Boston, 70
Christiania, 5 2 dms.
Christiansand, 36 pks.
Copenhagen, 1 1
Danzig, 6
Drontheim, 11
Ghent, 14 60 dms.
Gothenburg, 65 120
Hamburg, 22
Harlingen, 200 pks.
New York 70
Odessa, 64
Rotterdam, 17 1 2
St. Petersburg, 134 3 1
Stockholm, 21 1
Wasa, 52
Phosphates—
Landscrona, 592 t.
Pitch—
Reval, 10 t.
Slag—
Christiania, 1,021 bgs.
Soap—
Bergen, 1 cs.
Danzig, 1
Dunkirk, 15
Gothenburg, 1
Superphosphates—
Esbjerg, 501 t.
Memel, 529
Tallow—
Hamburg, 27 cks.
Odessa. 111 c.
Stockholm, 5 cks.
Wasa, 93
Tar—
Christiania, 1 ck.
Copenhagen, 20
Turpentine—
Drontheim, 2 cks.
Varnish—
Antwerp, 4 cks.
Bombay, 50 dms.
Hamburg, 4
Stettin, 15
Stockholm, 2 cs.

GLASGOW.

Week ending September 8th.

Ammonium Carbonate—
Rotterdam, £17
Ammonium Chloride—
Italy, 3 t. 18¼ c.
Ammonium Sulphate—
Barcelona, 446 t. 7 c.
Hamburg, 10 14
Italy, 81 3½
Rotterdam, 50 11
Valencia, 187 10
Bones—
Rouen. £55
Boracic Acid—
Wellington, £30 14s.
Borax—
Antwerp, £34
Caustic Potash—
Yokohama, £27
Caustic Soda—
B. Ayres, 29 t. 9 c.
Dunedin, 4 5½
Coal Products—
Creosote Oil
France, £2,115
U.S.A., 280
Naphtha
Dunedin, £39
Drammen, £3 10s.
Pitch
Canada, £456
Christiania, 51
Rotterdam, 10
Tar
Canada, £70
Christiania, £32 10s.
Riga, £500
Dyestuffs (*otherwise undescribed*)
Dunedin, £28
Timara, 103
Extracts—
Montreal, £69
Glue—
Dunedin, £36
Linseed Oil—
Canada, 5 t. 1¼ c.
Singapore, 2 3
Timara, 4 11½
Wellington, 2 10
Litharge—
Johannesburg, £23
Logwood —
Dunedin, £130
Pt. Lyttelton, 30
Magnesium Sulphate—
Montreal, £64
Paint—
Bombay, £153
Singapore, 26
Painters' Colours—
Auckland, £300
Calcutta, 74
Canterbury, 76
Cape Town, 246
Dunedin, 479
Kobe, 40
Rotterdam, 15
Sydney, 785
U.S.A., 136
Paraffin Wax—
Barcelona, £120
Genoa, 34
Italy, 190
Leghorn, 25
Valencia, 25
Potassium Bichromate—
Barcelona, £559
Hiogo, 156
Rotterdam, 39
Rouen, 73
U.S.A., 140
Potassium Chlorate—
Sydney, £175
Salt—
Christiania, 5 c.
Sheep Dip—
Auckland, £262
B. Ayres, 104
Cape Town, 200
Dunedin, 1,215
Soap—
Calcutta, 3 t. 7¼ c.
Puerto Cortez, 2 10
Sodium Bichromate—
Barcelona, 3 t. 6 c.
Rouen, 12 7¼
Starch—
Rotterdam, £170
Superphosphates —
Wellington, 5 t.
Tartar—
Pt. Lyttelton, £40
White Lead—
Gisborne, N.Z., £25

TYNE.

Week ending September 3rd.

Alkali—
Amsterdam, 7 t. 16 c.
Hamburg, 5 3
Rotterdam, 4 15
St. Petersburg, 10 12
Ammonia—
Aarhuus, 1,000 lbs.
Ammonium Chloride—
Gothenburg, 2 t. 4 c.
Antimony—
Gothenburg, 1 t.
Hamburg, 5
Barium—
Hamburg, 7 t. 7 c.
Barium Carbonate—
Reval, 150 t. 1 c.
Bleaching Powder—
Amsterdam, 7 t. 12 c.
Christiania, 37 4
Copenhagen, 8 3
Ghent, 25 5
Gothenburg, 55 7
Rotterdam, 12 15
St. Petersburg, 33 12
Caustic Soda—
Barcelona, 5 t. 4 c.
Christiania, 7 14
Gothenburg, 4 18
Harlingen, 4 18
Reval, 12
St. Petersburg, 51 18
Fluor Spar—
Gothenburg, 10 t.
Litharge—
Amsterdam, 10 c.
Magnesia—
Antwerp, 1 t. 6 c.
Hamburg, 19
Paint—
Antwerp, 1 t.
Barcelona, 1 c.
Copenhagen, 10
Hamburg, 3
Paraffin Wax—
Barcelona, 3 t.
Phosphorus—
Barcelona, 1 t. 9 c.
Pyridine—
Hamburg, 1 t. 17 c.
Soda—
Aarhuus, 7 t. 19 c.
Christiania, 5 16
Rotterdam, 10
Soda Ash—
Gothenburg, 70 t. 12 c.
Soda Crystals—
Gothenburg, 5 t. 18 c.
Sodium Sulphate—
Gothenburg, 220 t. 1 c.
Kallero, 419 8
St. Petersburg, 19 18
Sulphur —
Christiania. 10 t.
Gothenburg, 500 bgs.
Superphosphates—
Gothenburg, 82 t. 2 c.
Tallow —
Barcelona, 6 t. 1 c.
White Lead—
Oporto, 2 t. 6 c.

GOOLE.

Week ending August 31st.

Benzol—
Dunkirk, 1 ck.
Chemicals (*otherwise undescribed*)
Ghent, 1 ck.
Hamburg. 23
Coal Products (*otherwise undes.*)—
Amsterdam, 25 cks.
Boulogne, 6 tins 1 cs. 4 dms.
Ghent, 7 cks.
Colours—
Boulogne, 4 cs. 1 pk.
Ghent, 1
Rotterdam, 10 cks. 4 dms.
Manure —
Dunkirk, 150 bgs.
Hamburg, 305
Soap—
Antwerp, 26 cs.
Dunkirk, 26

GRIMSBY.

Week ending September 3rd.

Alkali—
Hamburg, 15 cs.
Ammonium Sulphate—
Hamburg. 160 bgs.
Coal Products (*otherwise undes.*)—
Hamburg, 2 cks.
Rotterdam, 26
Colours—
Antwerp, 1 ck. 2 cs. 1 pk.
Hamburg, 3 56
Manure—
Antwerp, 65 bgs.
Esbjerg, 7,520
Hamburg, 667

PRICES CURRENT.

WEDNESDAY, SEPT. 14TH, 1898

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 °/, and 40 °/, ... per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 °/,) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	0	0
Alum (loose lump) .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B .. .. ,,	0	0	2½
,, =24° B .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	0	0
,, ,, (grey) Hull .. .. ,,	9	18	9
Aniline Oil (pure) .. .. per lb.	0	0	5¼
Aniline Salt ,, ... ,,	0	0	4¾
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9½
,, 50/90 ,, ... ,,	0	0	9½
Carbolic Acid (crude 60°) .. .. per gallon	0	1	11
,, (crystallised 40°) .. .. per lb.	0	0	6¾
,, (liquid 95/97% .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	0	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	51	15	0
,, Sulphate .. .. ,,	16	17	6
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80 % .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	2	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	16	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, Nitrate	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	3	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P .. .. .. ,,	0	4	0
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	0	0
Stearine .. .. per ton	25	0	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	5	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	22	15	0
,, ,, (Caustic Potash) 75/80 % .. ,,	18	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton (f.o.r. wks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. wks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. wks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. wks.)	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. wks.)	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton (ton lots)	8	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,, (ton lots)	7	15	0
,, ,, (70 % Caustic Soda) ,, ,, ,, (ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	5¾
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6¼
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	22	0	0
Tin Crystals .. .. per lb.	0	0	5¾
,, English Ingots .. .. per ton	76	10	0
Zinc (Spelter) .. .. ,,	21	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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FOR WEAL OR WOE.

WITH the first touch of frost it is natural for our thoughts to turn to the universal source of heat—coal,—and yet what a crowd of doubts, fears, apprehensions, and misgivings are conjured up by that little word.

To the majority of people it loses this mystic power in the summer, though the recent experiences of the mercantile world with the Welsh coal producers show that, industrially speaking, it is a talisman all the year round.

It is bewildering to think what this constant fermentation of the labour market will lead to. We know that the chief products of fermentation are alcohol and carbon dioxide. The one exhilarates, the other suffocates, and it becomes a question whether those who welcome the yeast of the labour organiser will ever survive the deadly carbon dioxide which is necessarily evolved in the production of the alcohol which they strive to attain.

They become inspired with the hope of enjoying the alcohol—which, robbed of its metaphorical garments, means higher wages—and are prepared to do much and dare more, forgetful of the undeniable dangers and risks of the carbon dioxide which represents—no wages at all.

One thing is certain. If the dangerous carbon dioxide is to be survived, there must be plenty of ventilation; and yet the latter is seldom courted by those who clamour most for the alcohol.

Once more we are on the verge of a crisis in one of the greatest centres of the coal trade—Lancashire and Yorkshire. Under the terms proposed last July the present wages were to be raised 2½ per cent. from the first of next month up till January 1st, 1899, from which date the wages were to be regulated by a Conciliation Board formed under the Rosebery agreement, for a period of two years; the powers of the Board being defined by the proviso that during these two years the rate of wages should not fall below 30 per cent., or rise higher than 45 per cent. above the rate prevailing in 1888. Now, it appears, there is a feeling among the men and a few of their leaders that an immediate advance of 10 per cent. should be insisted upon *vice* the 2½ per cent., and prior to the Conference on Saturday there was a majority in favour of refusing the terms proposed in July.

These facts have been laid before the Coalowners' Association by the Executive of the Miners' Federation, and the former have refused the demand for a 10 per cent. advance, and offered even less advantageous proposals as the only alternative to the terms offered in July.

Under these circumstances the men have simply to decide whether they will accept the July terms or come out on strike for the 10 per cent.

Now, it is worthy of note that the leader of the Yorkshire men is counselling them to drop the 10 per cent. and accept the original terms made in July, and this attitude has been

supported by the representatives of the Federation, who, after the joint Conference on Saturday last, adopted a resolution to the same effect. They are evidently convinced that a positive 2½ per cent. is better than the remote possibility of 10 per cent. Will their advice be followed? The Welsh dispute was carried to open hostilities against the advice of the leaders, and there is, we fear, a likelihood of the same thing being repeated on Wednesday next when the men have to give their answer. It is a most unhealthy sign that there should be any doubt about following the advice of the majority of their counsellors. What use are they if they are not heeded? There seems to be a feeling that Unionism must be militant or nothing at all. Twice this year have the leaders advocated the true spirit of Unionism. The first time their advice was ignored, and we have just seen the result in Wales. Would it not be as well to give *their* method a trial on this second occasion? If the men show that they are incapable of displaying a spirit of give-and-take, they can hardly expect to be met in this spirit by the coalowners. If persistent antagonism, like motley, is their only wear, they must only look for dogged opposition in the future. They may think now that the former is very heroic, but they will also find that the latter is not very feeding when the coffers are empty and the patience of the public exhausted.

LEAD IN THE ISLE OF MAN.

WHAT promises to prove a valuable discovery of lead has just been made at Douglas. The spot is situated behind the gasworks, and is part of several acres of ground leased about twenty years ago to a Liverpool syndicate, which was unsuccessfully worked, finally abandoned, and sold. It is stated that £11,000 was lost in the venture. A shaft thirty fathoms deep was sunk, and a level 100 fathoms long made, but no lead was found. Two years ago the owners—of whom Mr. H. E. Hardy, chartered accountant, Castle-street, Liverpool, was one of the chief, and Mr. Bird, solicitor, of Liverpool another—sold their rights to Mr. John Cain, of the Esplanade, Douglas. It looked like throwing money into the sea. At the end of twelve months Mr. Cain was required to pay the balance of the purchase money. He had done nothing, and offered to sacrifice a good sum to get out of the agreement. This offer was not accepted, and the matter was put into the hands of the Attorney-General to recover the full amount. Accordingly a complete deed of sale was given, and the money paid. While the suit was pending a quarryman working on the ground accidentally came across a layer of lead. The vendors wavered, but Mr. Cain stood firm, and the property became his. Five months ago experienced men began prospecting in quite another part of the disused shaft and level, and they have met with encouraging results. After driving only a 13-fathoms level into the side of Douglas Head, and a 4-fathoms on the cross-cut, a deposit of lead has been struck, rich in silver. Pieces of the mineral, weighing eight and nine pounds, and almost pure, have been taken out, and the vein is improving. From what can now be seen the success of the undertaking is assured. It may be that a new industry—which is badly needed—will be created in Douglas. At all events, the discovery well illustrates the adage that one man's loss is another man's fortune.

"Abrolis" Mineral Water.—We have had an opportunity of testifying personally to the quality of this table water, and as far as the palate is concerned it is excellent. It is sufficiently rich in natural carbon dioxide to render it highly effervescent without any artificial fortification, thus avoiding any tendency to harshness on the palate or metallic taste. Its medicinal qualities are confirmed by the following analysis of the water as bottled at the Tönnissteiner Spring, Brohl a/Rhine:—*Fixed Constituents per 10,000 parts:* Carbonate of soda, 18·159; carbonate of lithia, 0·039; carbonate of ammonia, 0 053; carbonate of lime, 3·827; carbonate of magnesia, 10·742; carbonate of protoxide of iron, 0 213; oxide of manganese, 0·003; sulphate of soda, 1·476; sulphate of potash, 0·999; phosphate of aluminium, 0·001; phosphate of sodium, 0·001; bromide of sodium, 0·008; chloride of sodium, 14·148; silicic acid, 0·274. *Volatile Constituents:* Free carbonic acid, 40·63; free and semi-combined carbonic acid, 66·08.

IMPORTS AND EXPORTS FOR AUGUST.

THE Board of Trade returns for the past month are satisfactory as a whole, but the chemical items are hardly encouraging. The *imports* of nitrate of soda and pyrites show the largest increase. In the *exports* decreases are mostly the order of the day, except for chemical manures.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.	Quantities. 1897.	1898.
Margarine ..... Cwt.	77,098	72,474
Copper Ore and Regulus..... Tons	18,684	16,622
Pyrites..... ,,	48,708	58,202
Tin ..... Cwt.	24,953	25,488
Alkali ..... ,,	18,496	22,812
Brimstone ..... ,,	47,668	48,152
Dyes, Coal Tar ..... £.	51,603	60,472
Saltpetre ..... Cwt.	22,551	24,144
Petroleum ..... Gall.	13,235,414	21,764,305
Turpentine ..... Cwt.	56,787	94,871
Guano..... Tons.	—	542
Nitrate of Soda ..... ,,	565	5,856
Paraffin Wax..... Cwt.	62,720	70,104
Rosin ..... ,,	156,159	146,213
Tallow and Stearine..... ,,	102,177	143,474
Tar..... Barrels	34,551	25,118
Oil Seed Cake ..... Tons.	24,678	24,358
Wood Pulp..... ,,	35,864	38,913
Borax ..... Cwt.	—	80

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1897.	1898.
Alkali ..... Cwt.	376,186	271,245
Cement ..... Tons.	36,089	23,765
Coal and Coke ..... ,,	3,406,053	3,078,525
Copper, all kinds ..... Cwt.	81,884	87,304
Iron and Steel ..... Tons.	287,719	294,142
Chemical Manures ..... ,,	50,496	53,122
Oils, seed ..... ,,	3,512	2,838
Salt ..... ,,	48,554	43,571

Nitrate Tonnage.—Messrs. Lloyd Lowe, Limited, London, have issued a complete list of the sailing and steam tonnage, chartered and unchartered, available for nitrate for September to December loading. The fixed sailing vessels number 206, with a d.w.c. estimated at 496,381 tons, while the chartered steamers number six, having a d.w.c. of 38,500 tons. Sailing vessels bound to the coast unfixed number 22, of a d.w.c. equal to 122,941 tons. The capacity of the liners is put down at 48,000 tons for the four months. Of the above total, 218,000 tons d.w. is bound to the Coast in ballast, including 70,000 from Europe, 70,000 from East Coast South of America, 45,000 from Pacific ports north of Callao (of which 16,000 from 'Frisco), and 33,000 from Japan, Cape, and other directions. Taking the actual shipments for the first eight months of the present year as 585,000, the above total would show sufficient tonnage available to complete an export of 1,290,000 tons of nitrate from 1st January, 1898, to 1st January, 1899, although it is probable that the exceptionally heavy shipments to be made during the latter portion of the year may delay some of the sailings beyond the 1st January.

Useful Trade Suggestion.—The British Vice-Consul at Hamburg has furnished a communication to the *Daily Mail* on a neglected aid to British commerce. "A very able corps of co-workers," he states, "remains unorganised, unrecognised, and comparatively valueless as a source of commercial information. I allude to the 15,000 British shipmasters, who are responsible for the safety of over 13,000,000 of British tonnage, which conveys, roughly speaking, £1,000,000,000 (British £100,000,000) of imports and exports to and fro in the world annually. Visiting every port in every clime, dealing directly with foreign authorities and foreign merchants, their experience is, I am convinced, a latent mine of information which would gladly be placed at the service of chambers of commerce and of their fellow-countrymen, home and colonial, were a public appeal made to them and a satisfactory method of collecting and collaborating such information called into being in the shape of a Nautical Chamber, composed of British shipmasters and certificated officers of the Mercantile Marine, both navigating and engineering." The writer added that for the present a small body of advisers have placed themselves at his service.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Bone Mill. J. Onions. 18,910. September 5.
Boiler Disincrustants. E. L. Blosse. 18,923. September 5.
Treating Refractory Sulphide Ores. F. Ellershausen. 18,933. September 5.
Electrolytic Decomposition of Salts. E. Edser. 18,958. September 5.
Explosives. A. von Stubenrauch. 19,028. September 6.
Water Softening Apparatus. G. Hönig. 19,034. September 6.
Matches without Phosphorus. S. A. Rosenthal and S. J. von Romocki. 19,039. September 7.
Manufacture of Prussiate of Potash and Prussian Blue. B. Piffard. 19,050. September 7.
Distributing Apparatus for Sewage Tanks. M. J. Adams. 19,063. September 7.
Explosives. W. H. Cromie. 19,074. September 7.
A Benzene-soluble White Soap. G. Bornemann. 19,150. September 8.
Ozone Apparatus. D. Martini. 19,180. September 9.
Explosives. W. Friese-Greene. 19,260. September 9.
Extracting Benzols from Heavy Oils. S. Pitt. 19,321. September 10.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

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Improved Means for Purifying the Effluent Water of Factories and the like, also River Water and Sewage. W. & W. E. Greig, both of Creek Mill House, Dartford, Kent. Eng. Pat., 29,070. Dec. 8th, 1897.

The apparatus consists of a series of closed settling chambers, and a closed filtering chamber containing removable cages of ashes, which act as the filtering medium The chambers are connected by upturned pipes, while means are provided at the inlet settling chamber for forcing the liquid to be purified through the system. There are three figures.

Improvements in and connected with the Filtration of Sewage and other Foul Liquids. H. F. Hibbert, Southport-road, Chorley, Lancs. Eng. Pat., 27,500. October 1st, 1897.

This patent is wholly mechanical, and refers to a method of distributing the sewage evenly over gravitation filters by means of specially constructed perforated channels. There are three figures.

An Improved Method of Purifying Sewage and other Foul Waters by means of a Secondary Process, following other Primary Processes. J. B. Petrie, Tunshill House, Milnrow, near Rochdale, Lancs. Eng. Pat., 17,261. July 22nd, 1897.

The sewage is first passed through settling tanks, to remove solids as far as possible. It is then passed over ferric salts, such as the perchloride or per-sulphate. In this way it is claimed that much less of the precipitant is required to effectually throw down the solids in solution. The effluent is then finished by being passed through a second settling tank and on to filters. Sometimes ferrous salts are used first, and when the presence of ferric salts is desirable in the latter stages of the chemical treatment, a current of electricity is passed through the sewage, thus converting the ferrous salts in solution into the ferric state.

Improvements in the Treatment of India-Rubber, Gutta-Percha, and other Natural Elastic Substances. Dr. C. Repin, 23, Boulevard Montparnasse, Paris. Eng. Pat., 12,327. June 1st 1898.

Chinese wood oil, or "tung" oil, will solidify into a solid elastic mass, without the addition of any foreign matter, when heated for a few minutes at 250°C. This mass is mixed with caoutchouc, etc., for various purposes and reasons. The addition of linseed oil retards the solidification of the "tung" oil. To incorporate the solidified oil it is best to saturate it with petroleum, which swells it without dissolving it. When the hydrocarbon has evaporated, the mass returns to its original state, but in a more powdery form. If desired, the partially solidified oil can be mixed with rubber, and the solidification finished by heat or sulphur chloride.

Improvements in the Manufacture of Candles. N. A. Alexanderson, 88, Danviksgatan, Stockholm. Eng. Pat., 7,671. March 30th, 1898.

To prevent candles burning right down into the socket of the holder, the wick terminates a short distance from the end, where it is encased in a sleeve, so as to be self-extinguishing. Round this sleeve a recess is moulded in the candle, in which the molten stearine, etc., collects, while the wick expires. Ignition of the melted portion of the candle is thus avoided.

Manufacture of an Improved Soap. E. Wilczynski, 1, Chaussestrasse, Berlin. Eng. Pat., 24,773. October 26th, 1897.

The object is to produce a soluble lime soap. To prepare such a soap, the necesssay amount of milk of lime is incorporated with the tallow, etc., to form the usual insoluble lime soap. Then to every four parts, by weight, of lime used, six parts of sodium fluoride (previously dissolved in water) are added, and the soap heated until ready. It is claimed that an unctuous, cleansing, soluble lime soap is thus produced.

THE ANTI-SMOKE CRUSADE.

MRS. HOPWOOD AGAIN.

AT the Bury County Police Court on Tuesday, at the instance of Mrs. Hopwood, of Hopwood, the East Lancashire Paper Mill Company, of Radcliffe, were summoned for allowing the chimney at their works to emit black smoke in excess of that allowed by the bye-laws. Evidence was given by two of Mrs. Hopwood's inspectors, Cotterill and Chisholm, as to the excessive black smoke issuing from the chimney on three specific dates, and evidence was called to show that the company had gone to a lot of expense, and were still doing so, in making costly improvements in order to decrease the amount of black smoke passing through the chimney. Mr. F. Howarth was for the company, and Mrs. Hopwood conducted her own case. Mr. Howarth's contention was that an order had already been made against the company by the Court on the application of the Radcliffe Urban District Council, and time had been granted to the company in which to make improvements, the District Council in the meantime being satisfied that efforts in the right direction were being made. In support of this contention Mr. Richard Barlow, chairman of the Health Committee of the Radcliffe District Council, was called. Mr. Howarth further stated that it was a contention of Mrs. Hopwood's that she was within her rights in laying these informations in Radcliffe, inasmuch as she was a property owner there. He wished to ascertain really what that property was. Smoke Inspector Chisholm, in reply to Mr. Howarth, admitted that the piece of land owned by Mrs. Hopwood was in Rectory-lane, was ten yards square, and was vacant. Upon this point considerable discussion ensued. In answer to the Clerk (Major Hall), Mrs. Hopwood said she had the land on a building agreement, on a rental of £1. per annum, from the Earl of Wilton, but the Clerk held that she was not owner according to section 4 of the Public Health Act, and the magistrates upheld the point. Mrs. Hopwood then proceeded with her case on the ground that she was an aggrieved party by reason of the smoke being a nuisance to her at Hopwood. Mr. Howarth said that was a very long way for smoke to travel—it must be seven miles fully.—Mrs. Hopwood said she had known smoke to travel that distance.—The magistrates ultimately made an order to abate the nuisance in three months, and ordered the defendants to pay costs.

With all respect for the estimable lady and the sincerity of her beliefs, it almost seems that her vapourings are going to prove more noxious than the smoke she would suppress.

THE CINCHONA INDUSTRY OF JAVA.—The British Consul at Batavia, in his last report on the trade of Java, mentions an important development in the cinchona industry of the island. Java produces about two-thirds of the world's supply of cinchona, and it has for years been regularly shipped to Holland, where it has been sold by public auction. The large quinine manufactories, which are mostly situated in Germany, supply themselves with the raw material in the Dutch market, and of late years the manufacturers have combined to keep the prices at such a low level as to render the cinchona cultivation unprofitable, although the manufacturers of quinine have been earning large dividends. To meet this combination it was resolved to establish a quinine factory in Java, and this has been done at Bandoeng, where the first Java quinine has been produced. This is described as of excellent quality and equal in all respects to the best European brands. Some of the planters were tempted early last year by the rise of prices in Europe, consequent on the establishment of the factory at Bandoeng, to consign their cinchona to Europe rather than to their own factory; but more recently they have seen that this course must result in the destruction of their own factory, and now the latter is being well supported with the local raw material. Some large shipments of Bandoeng quinine have been made to London, and smaller ones to other parts of the world, and the future of Java quinine will depend on the result of these ventures. Last year the total production of cinchona in the island was over 8½ million pounds avoirdupois.

Selected Correspondence.

A FARMER'S EXPERIENCES OF BASIC SLAG.

(To the Editor of the Manchester Guardian.)

Sir,—With regard to Mr. Long and his remarks on basic slag, allow me to remark that slag does not answer on all sorts of land, but that it does answer on peaty land and strong clay. It answers here on every crop we grow, and on potatoes as much as anything. I have a large field of seeds that had 5 cwt. per acre put on the first week in last October. It was stocked in the daytime last February with ewes and lambs, but the animals were taken off at night till May was out, for we often get frosts late in May. The field is a picture now. It does not look as if it had gone through all the dry, hot weather it has. I have a 20-acre field that has been dressed four years out of five with slag, costing about ten shillings per acre, and mown every year, and in the fifth year it has had a crop of over two tons of hay per acre. This is an old arable field that used to have a naked fallow regularly. In 1877 and 1878 it cost over £40 for steam cultivation. It was then sown with wheat, but it got starved off in the winter and had to be ploughed up and sown with oats, of which, after two years' rest and getting 3 cwt. of Peruvian guano per acre, it grew a very moderate crop. The year following it grew swedes without any farmyard manure, and all were carted off. The year after it was sown with oats and seeds for one year, but it has lain in grass ever since, and the quality of hay it grows with basic slag is first-rate, as full of good herbage as you could wish for. I used to give the men double wages for sowing it and whatever beer they asked for, for it was a nasty job; but now that we have it sown by a drill it is not so bad to handle. It is not a costly thing to try. We know that there is land where it does no good, but where it does answer it is the cheapest manure you can buy. Some years since I asked a well-known auctioneer if he used as much bones as formerly. "No," he said; "I have given them up entirely." "Why," I said, "what are you using?" He said "Basic slag, which costs half the money and does better." There is a field close to here which in 1879, after a naked fallow, grew less than three sacks of wheat per acre. In 1880 it was sown with oats and seeds, getting 2 cwt. of Peruvian guano per acre. It has been in grass ever since, and is about as poor a field as you can find in the county. Last year it was given a dressing of slag, and both last year and this it has been as pretty a pasture as you would wish to see, and the stock have done well on it, the field carrying more than double it ever did before. Another field of the same sort last year had a crop of swedes on it, all carted off, grown with 4½ cwt. of basic slag. This year it has grown the best crop of oats it ever did grow, and it is many years since it had farmyard manure on it. I have as big a crop of wheat as can be found in this county grown after oats, 5 cwt. of basic slag being put in with the seed and 2 cwt. of sulphate of ammonia put on it early in March.

It used to be the rule in Cheshire to grow oats after wheat, but many years since, in driving in the heart of Yorkshire, I saw a very good crop of wheat, and they told me it was after oats. A farmer in this county used always to grow his oats after wheat, he having farmed near Chester for some years. This year he has sown his wheat after oats, putting 1 cwt. of sulphate of ammonia on early in March. He says now he is certain that it is the best way, and he will do the same again. We know good manure made by cattle fed on cake and corn tells on strong land for many years, but there is stuff that costs much less money than manure that is carted long distances out of Manchester. Even where this is practised, if other stuff were tried, they would cart less of bulky manure. Even 3 cwt. of superphosphate put on any crop helps it greatly, and basic is much of the same nature, having two things in it that all crops require. Even bones do no good in some parts of Cheshire, yet there is no county where they answer so well as a rule; yet many in Cheshire are using basic in place of them.—Yours &c.,

Skimblescott, Much Wenlock, Salop, John Wooley.
September 19, 1898.

THE CREMATION OF SEWAGE.

(To the Editor of the Times.)

Sir,—Your correspondent, Archdeacon T. W. Sheringham, Canon of Gloucester, calls attention to the failure of our present methods of sewage disposal in England and the scandalous pollution of our rivers and sea coast, and pleads for "the erection of huge furnaces at the outfalls of our drains" and the cremation of sewage. No one who travels in England can fail to agree with Archdeacon Sheringham as to the disgraceful state of things at present, or withhold sympathy with him in his desire to render the rivers and sewage farms more pure and less offensive. But the improvement of these matters is not a simple problem, but one calling for much study and special knowledge, as *will at once be apparent* from a consideration of the circumstances under which the existing conditions of our rivers and sewage farms have grown up. So far back as 1875, when the Public Health Act of that year was passed, the disposal of the sewage of our towns was sufficiently important to call for legislative action, and in the following year the Rivers Pollution Prevention Act of 1876 was passed, under which Act no one, neither a sanitary authority dealing with the sewage of a district nor a private manufacturer dealing with the trade waste of his business, was allowed to discharge any polluting matter into a stream unless he could show that he was using the "best known and available means of rendering such polluting matters harmless." Here we find an authoritative admission of the difficulty to be overcome, and a loophole of escape for an offender which has naturally been made the most of during the past 20 odd years. But the Government of that day, recognising how real were the difficulties to be overcome, appointed a special commission to investigate the subject and assist with advice, which they did in a report issued in 1881. In that report the commission, having ascertained the very great intricacy o the problem and the insufficiency of our scientific knowledge at that time to deal satisfactorily with it, declined to fix any definite standard of purity which should be legally considered unpolluting, and uncertainty and considerable variability on that point exist to this day. The only practical result arrived at by that commission was that no treatment of sewage by chemical precipitation and filtration was good enough to give an effluent sufficiently pure to be discharged into a stream, but that the safest method of purifying sewage was to irrigate land with it, trusting to the nitrifying action of the micro-organisms in the soil to dispose of the nitrogenous organic putrescible matter in the sewage. This rather vague and uncertain finding of that commission has formed the basis of what may now be considered as the law in England—viz., that all sewage shall be treated on land before it can be allowed to flow into a stream; hence the universality of the sewage farm. At the time this ruling of the special commission was published the action of the bacteria in different soils had not been carefully or sufficiently studied; it had not been considered how slow this action is under natural conditions at different seasons of the year, even in suitable soils, and how practically useless such treatment is on many soils.

The elements of failure by land treatment are too numerous and too important ever to make this method a safe and satisfactory process of sewage disposal. The unsuitability of the soil, the great difficulty of proper and even distribution of the sewage, the fall of the temperature below 37° F., when bacterial action is practically suspended, all these are elements of failure which are more than sufficient to account for the state of our sewage farms, which, as Archdeacon Sheringham points out, are, in most cases, "miserable subterfuges." Though the sewage farm in 99 cases out of 100, may be admitted to be a failure, we see there was some good reason for its adoption, and in principle it is sound. Can as much be said of Archdeacon Sheringham's suggestion of huge furnaces in which to cremate liquid sewage, and is such treatment likely to effect the object sought for—viz., the purification of our rivers? Any one who has had experience of the evaporation of sewage, or even the burning of dry-pressed sewage sludge, knows what fearful offence is caused. Such works can be felt for half a mile at least. The nuisance could, no doubt, be minimized by the construction of lofty chimneys and the use of chemical ingredients as suggested, and the introduction of scientific and costly destructors, but will not the great cost of such treatment prevent its being used or enforced?

To hang a man for sheep-stealing is not the readiest way to put an end to the stealing of sheep; it would in these days only make it impossible to get a conviction; and, in the same way, to make the cost of sewage purification practically prohibitive would make it impossible to put pressure on an offender.

The difficulty of enforcing the law would seem to be great enough now when our large cities like Manchester, Salford, Leeds, Bradford, and others are allowed to continue to pollute because the sums of money involved in purification are so great and the influence brought to bear to avoid such heavy outlay is so powerful. I fear the only effect of Archdeacon Sheringham's suggestion would be that, while the water of our rivers and the land of our sewage farms remained polluted much as at present, we should in addition foul our air as well.

To put a stop to the scandalous pollution of our rivers is perfectly feasible, and to do this at such a trifling cost as shall afford no excuse for non-performance of their duty on the part of any sanitary authority, or the non enforcement of the law on the part of any county council or river authority, is also within easy reach, and it is to be hoped that the Royal Commission now sitting to consider this very important subject will, in the light of the knowledge of to-day, give a more certain sound than could be obtained in 1881. The principle laid down by the commission in 1881 was correct. Sewage can practically only be purified by means of micro-organisms as proved and designed by nature; but to suppose that man may convert millions of gallons of pure water, stored and collected for the use of crowded communities, into foul sewage, and then on whatever land may be

within reach re-convert this into pure water again, is to expect too much. The requirements of civilized man have created certain artificial conditions which can only be met by corresponding artificial treatment, but the law of nature need not be transgressed or departed from. In the working of nature it will be found that the purification of sewage on land is effected only in the upper few inches of the soil where air in the necessary quantities can penetrate, and that the land itself must be open and porous, and under such conditions the area of land required must be large and the distribution of the sewage on it must be regular and even.

Now, if an artificial filter be prepared in which the interstices in the filtering medium be sufficiently open to allow a free passage of air, and the sides of the filters be made porous so that air can enter throughout the entire depth of the filter, we have the same condition as nature works with, only the operation, instead of being confined to the upper few inches, can be continued through a depth of many feet, thus enabling the area of treatment to be greatly curtailed, whereby accurate distribution of the sewage can be effected at little expense, artificially warmed air can be supplied in winter, and all the conditions of nature can be complied with.

The operation of such an aerated bacterial filter as above described has been tested for a considerable time at the sewage farm at Hendon on the Brent, within an hour's drive of London, and should be seen by all those interested in the non-pollution of our rivers.

Yours faithfully,

NON-POLLUTION.

A BACTERIOLOGICAL LABORATORY FOR LONDON.

A SHORT time ago the London County Council addressed a communication to each of the vestries and district boards throughout the metropolis asking them whether they would be in favour of the Council applying for Parliamentary powers to establish a bacteriological laboratory. The idea is to appoint an expert or experts in connection with the projected institution, or otherwise to make arrangements whereby medical officers of health and medical practitioners in London could obtain, at the expense of the county, the examination by a competent bacteriologist of material from suspected cases of infectious disease, with a view to aiding in the diagnosis. Owing to the summer vacation of the various local authorities the proposition has not yet been fully considered by the majority, but so far as those are concerned who have paid attention to the question, the scheme has met with unanimous approval. Among those authorities who have already pronounced in favour of the project may be mentioned the vestries of Shoreditch and St. Pancras. In the case of Shoreditch the health committee of the vestry point to the laboratory established by the city of New York some five years ago in connection with a scheme for general bacteriological examination of cases of diphtheria, and state that it has been received by the medical profession of that city with almost unanimous approval. The Shoreditch committee mention further that several towns in the provinces and some of the London sanitary authorities appear to have also made arrangements whereby medical practitioners can send pathological material to experts for bacteriological examination. Believing that it would be desirable in order to secure uniformity and economy that such provision should be made, the Shoreditch vestry has just informed the County Council of its advocacy of such a laboratory. In St. Pancras the vestry has already made some progress in the direction indicated, since from a report just submitted to the health committee by Mr. John F. J. Sykes, medical officer of health, it appears the vestry early last year sanctioned the examination of pathological material in doubtful cases of diphtheria and typhoid fever, the examinations being made when necessary, and they are considered essential to the proper notification and prevention of the spread of the disease to which they apply. Two questions have to be considered—(1) whether it is more desirable to carry on the work locally or to centralise it; and (2) if centralised, which is the best method or public body for centralisation. In this connection the health committee of the St. Pancras Vestry states that systems have been organised by the several sanitary authorities in conjunction either with the British Institute of Preventive Medicine, the Clinical Research Association, or the bacteriologists of the large London hospitals. At the same time, the small hospital laboratory at each of the large infectious diseases hospitals of the Metropolitan Asylums Board is utilised for the purpose of examinations of this nature. Taking all the points into consideration, the St. Pancras Vestry have come to the conclusion that a central bacteriological laboratory should be established, and express the opinion that such an institution could be provided by the Metropolitan Asylums Board, under the latter's Parliamentary powers, in the new premises now being built on the Victoria-embankment. A letter to this effect has been addressed to the County Council. As the London County Council does not meet until next month, and as the vestries and district boards are only now beginning to resume their proceedings, some little time will elapse before all the replies are in the possession of the Council. As these will not require much consideration, it is possible that the Public Health Committee may be in a position to submit to the Council a recommendation on the subject early in November next.

FATALITY AT AN ICEWORKS.

AN accident of an unusual character occurred on Saturday afternoon last, at the works in George-street, Glasgow, of the Scottish Cold Storage and Ice Company (Limited). In consequence of the valve of a gas engine getting out of order, a pipe burst, resulting in the escape of an immense quantity of ammonia gas. At the time of the occurrence there were eight men on the premises, including Mr. Henry Carphin, manager of the works, and they were all overtaken with the dense vapour. Fortunately, several of them were able to make their way to the street, and, getting clear of the gas, were soon out of peril. The others, however, were unable to leave the building immediately and were rendered unconscious by the powerful fumes. With the exception of the manager they were speedily rescued, and although seriously injured it is believed that their recovery is well assured. Mr. Carphin, who is supposed to have been standing beside the engine when the accident took place, was able to move only a few yards before he succumbed, and as it was impossible to reach him from the outside on account of the poisonous condition of the atmosphere, his body could not be recovered until ten o'clock, fully five hours after the explosion. By this time a fresh breeze had greatly cleared the air. The body was found in the office in the sunk flat adjoining the engine-room, and it was evident that he could not have lived more than a few moments after being overtaken by the vapour. Mr. Carphin, who was 50 years of age, resided at 125, Great Western Road. The other men engaged at the works were George Mathieson, engineman; Thomas Graham, compressor; Duncan M'Farlane, foreman engineer; Edward Wilson, ice maker; William Greer, storeman; Samuel Gaylor, gas engineman; and Henry Carphin, clerk, son of the manager.

The stifling, pungent odour of the ammonia spread rapidly over a considerable area, so much so that as a precaution all traffic, except the tramway cars, was stopped in George-street. Large crowds gathered in all the adjoining streets, but the people were kept at a distance from the scene of the disaster by the overpowering condition of the atmosphere. A detachment of police, under Superintendent Orr, maintained order in the streets; and the members of the Fire Brigade, under Captain Paterson and Superintendent Muir, were quickly in attendance, and worked with great courage, in face of the baffling fumes, to rescue the men in the building. Among the spectators a painful feeling was created by the knowledge that the rescuers had been unable to reach the manager, and that the willing and eager assistance so close at hand was unavailing by reason of the suffocating nature of the gas with which the firemen had to contend. The works, which occupy the whole of a high building, have been in operation for only a few months, and are the only ones of the kind in Scotland. They turn out a large quantity of ice, besides being used for the purpose of storing goods of a perishable nature. During the day about 50 men are employed, but on Saturday afternoon only the eight men already mentioned were on duty. It is a mistake to suppose that there was any explosion of the ammonia receivers, as was bruited on Saturday; not a pane of glass or an electric lamp was broken, and there was no report. The accident is entirely attributable to the bursting of an iron pipe, through which the ammonia was conveyed from one part of the system to another, just as any ordinary gas, water, or steam pipe might have burst. The pipe in question was subjected by the manufacturer to a hydraulic test equal to 700 lb. pressure on the square inch, which was considered ample, as that is considerably more than double what it would be subjected to in connection with plant working in normal conditions. An examination of the pipe showed that a piece was blown out in the side at what is known as a knee—a bend of that shape—but how this occurred in the case of such a strong pipe still remains a mystery. The broken part of the pipe has been taken possession of on behalf of the Procurator Fiscal. That there was no explosion is very evident from the appearance of the works. There was no wreckage and no damage of any kind was done, except the burst pipe, and the gas engines and other machinery are at work again, the business of the Cold Storage Company being in no way interfered with. There were no flames, and the "burns" which the workmen received were caused, not by fire, but by the excessive lowering of the temperature due to the escape of such a quantity of ammonia. Graham, who appeared to be progressing favourably, became worse on Monday, and died in the Royal Infirmary at seven o'clock in the evening; while Macfarlane has since succumbed making three victims.

Reports of Companies.

NEW JULIA NITRATE COMPANY, LTD.

The shareholders of this company met recently at the Holborn Restaurant, E.C., to elect a liquidator under the winding-up order recently made on the petition of a creditor.—Mr. G. S. Barnes, the Official Receiver in charge of the case, reported that the company was a reconstruction of the Julia Nitrate Company, which was formed in 1889 to acquire from a Mr. Harington certain nitrate lands in Chili for £125,000. That company was promoted by the late Mr. Hume Webster. Its nominal capital was £150,000., and fully-paid shares to the amount of £40,000. were issued to the vendor. Shortly afterwards the Taltal Nitrate Company was formed to acquire the Taltal property, which adjoined the Julia property. In May, 1894, the two companies were amalgamated into a company entitled the Julia-Taltal Company, which was incorporated with a nominal capital of £200,000. That company acquired the Taltal property for £4,000. Both properties were continued under one management, which, he was afraid, was bad. (Hear, hear.) Very little nitrate had been produced, only some 3,000 tons having been shipped in six years. The amalgamated company went into liquidation in May, 1896, when the new Julia Nitrate Company was incorporated with a nominal capital of £250,000. The issued capital was £200,000., represented by 400,000 shares of 10s. each, allotted to the old shareholders and credited with 7s. 6d. a share. That left a working capital of £50,000., out of which sum about £18,000. had been applied under the contract in the payment of the liabilities of the old company. The bulk of the remainder went in remodelling the old plant, erecting new plant, and providing stores, mules, and caliche. It appeared that a motive for the expenditure of this large sum on plant was the existence of the Nitrate Committee, which was formed to regulate the output of nitrate. That committee fixed the quota for the output of this company at 20,000 quintals a month, and in order to obtain that quota the company had to possess machinery capable of producing 60,000 quintals monthly. The Chilian Government later offered fresh nitrate lands to purchasers, with the result that over-production ensued and the price of nitrate fell from 6s. to 4s. 6d. per quintal. At the latter figure these nitrate grounds could not be worked at a profit; but, of course, if the price should rise again, the value of the grounds would proportionately increase. The statement of affairs had not yet been lodged, but the liabilities were stated roughly at £7,500., including a claim against the company in respect of the purchase balance owing on the Taltal property. An action was now pending in the Chilian courts with reference to that balance. Then, with regard to assets, they were not estimated at more than sufficient to cover the claims of the creditors; so that the shareholders had poor prospects of recovering their investments. Further, the liquidator of the old company, no doubt properly, refused to part with the title deeds or other property of the old company until the whole of the old company's liabilities had been either discharged or indemnified. That would be a matter for settlement between the old liquidator and the liquidator of this company. Mr. Wingfield (a director) had written him with respect to a reconstruction of this company, but he (the chairman) could only say that personally he could not favour any reconstruction in this case, and if he were a shareholder he would rest content and "cut his loss."—Mr. Horace Barrett, as representing holders of 21,000 shares, nominated Mr. William F. Mills for the office of liquidator; but a section of the meeting being in favour of the Official Receiver retaining the office, the matter was put to the vote, and the Chairman intimated that the appointment would be made later by the Registrar, who would have the figures duly reported to him.—A committee of inspection was also nominated.

DIVIDENDS.

San Jorge Nitrate Company.—An interim dividend of 2s. 6d. per share (2½ per cent.), free of tax, for the half-year ended June 30th, is payable on October 17th.

Armstrong, Whitworth, and Co.—The annual report of Messrs. Armstrong, Whitworth and Co. is issued, and a dividend is recommended at the rate of 2s. 8d. per share and a bonus of fourpence on the £1. ordinary shares, equalling 15 per cent. The dividend on the preference shares is five per cent.

Lead Poisoning at Paint Works.—At the Manchester City Police Court last week, the Manchester Paint and Varnish Company, Palmerston-street, Ancoats, were summoned at the instance of Mr. Rogers, Her Majesty's Inspector of Factories, for neglecting to comply with special rules requiring them to provide suitable washing conveniences and sanitary drink at their premises. On account of the danger from lead poisoning in paint manufacture it is necessary that proper washing arrangements should be provided, and that the employés have an ample supply of sanitary drink. A fine of 40s. and costs was imposed.

ARGENTINE COAL.

An expedition was organised recently by an Argentine naval officer, Commander William J. Nunes, to explore the South of the Argentine district for coal. Accompanied by Mr. Muggeridge and Mr. Ch. Hoskold, he started with a party of 20 men for Sloggett Bay, famous for its gold washings for the last fifteen years.

In his official report he says:—"I beg to submit to you the results of the exploration which, by superior order, I have carried out in the South of Tierra del Fuego with a view of ascertaining layers of coal and gathering samples in sufficient quantity to test their value.

"In view of the instructions imparted, I landed at Sloggett Bay on the 2nd of July last, and, after pitching my encampment in a sheltered forest at 200 metres distance from the coal mines, I began the work of exploration on the layers which were visible on the surface of the ground. These are situated to the East of Sloggett Bay and are very visible in the bluffs that rise from the sea; they embrace an extension of 300 metres front by 1200 to 1800 metres depth in a course from North to South.

"To the naked eye the general formation is one of a series of layers of clay and compact lime in various colours, alternating with great veins of rocks which contain lignite in blocks and streaks. The rocky veins reach the superior party of the bluffs, 70 metres high, and go down to the sea under whose surface they are lost sight of. They vary in thickness from 30 centimetres to three metres, follow a northerly direction 60° east with an incline of 45°, and inland to the North 30° West (true course).

"After picking out one of the thickest layers which revealed to the eye the largest quantity of lignite, I began the excavation of a horizontal tunnel three metres above the sea, with the intention of following up the vein and extracting therefrom the samples. The operation gave us a lot of trouble, as the surface ground was frozen hard and defied our tools; we had recourse to blasting. Owing to the brittle state of the ground these explosions produced great landslips in the superior layers, and we had to proceed to banking up with beams and heavy wood-work; although timber is abundant in the neighbourhood we had no time for such prepartions.

"I, therefore, suspended work in the tunnel, as I had only ten days to carry out the operation, and days are very short here in winter. The excavation did not exceed three metres, but some compact blocks of lignite of very good quality were extracted.

"I then extracted surface samples, and in two days the 120 bags I took from here were filled. I could have extracted larger quantities, but I thought that 120 bags would suffice for the purpose; furthermore, embarking coal without bags would have been an arduous task, owing to the heavy surf on this coast.

"The samples that I obtained were from the front of the bluff, extracted in blocks from between the layers of clay with levers and pick-axes; thus all the coal I have brought is superficial.

"I made some experiments with excellent results: both ignition and combustion were easy and complete, giving out much heat, much gas, and leaving little ash. I do not think there could be any objection to its employ as a general fuel, and in the judgment of persons better versed in the subject, it is superior to the lignite from the mines of Lota and Coronel in Chile, which is used in steam engines: the Sloggett coal contains less sulphur and is free from oxide of iron.

"I cannot venture any statement as to the probable quantity of coal in the layers that I have visited, as powerful perforators would be necessary for such a calculation; but all the geological data and the samples that I have gathered, indicate that the layers are important.

"The situation of the coal fields is favourable to their working, as they are situated 45 miles from Port Haberton, where there is excellent, roomy anchorage in 7 to 11 fathoms depth of water, and perfectly protected from all winds.

"I received information of the presence of other carboniferous layers at a distance of six miles, but ocular inspection proved that they were of no importance.

"There are lignite layers in several parts of Tierra del Fuego, but none can compare with those of Sloggett Bay in importance and facilities of working, owing to proximity to a good harbour, and the topography that lends itself to easy railway construction.

Should, in view of the information I hereby impart, and of the result obtained from the samples that I have brought, the exploration be continued, I beg leave to suggest the expediency of applying to the work a perforator, of 15 centimetre bore, with steam engine, in order to penetrate a depth of more than 300 metres, since, as I have stated above, the incline of the layers at the surface is 45°, and the neighbouring geological formations indicate that this angle must be constant in a great extension, the horizontal or less sharply inclined strata being only present at 300 metres from the layers."

From the guarded tone of the above note of Commander Nunes, which is at best hopeful, the Buenos Ayres *Standard* says we may be pardoned if we harbour misgivings at first, and looked upon this Sloggett

coal with the perfumed, sulphuretical reminiscences of Mr. J. Haase's lignite, anthracite, or whatever other name it bore; but, in view of the chemical analysis of the samples brought up by Commander Nunes, and of the tests to which his ligni'e was submitted last month in the locomotive of the Port Railway, which dragged trains for a full working day with the same ease as if fed by Cardiff black diamonds, we are now convinced that Argentina has struck coal at last, and the event is transcendental in the history of the country. The chemical analysis to which the Sloggett lignite has been submitted could not be more satisfactory; it is undoubtedly superior to the stuff turned out of the Lota and Coronel mines of Chile; furthermore, the analysis shews that it contains no sulphur, and that the residuum after ignition and combustion is only 2%, say less than that of coal imported from the United Kingdom.

LIQUID FUEL FOR STEAMERS.

ADVANTAGES AND DRAWBACKS.

THE trial-trip of the steamship *Haliotis*, the latest addition to the fleet of the Shell Trading and Transport Company, managed by Messrs. M. Samuel & Co, which took place last week on the Thames below Gravesend, possesses special interest from the fact that liquid fuel was used to heat the boilers. Among those on board were Sir John Durston, K.C.B., Engineer-in-Chief of the Admiralty, Sir Marcus Samuel, Mr. Fortescue Flannery, M.P., under whose direction the work has been executed, Colonel Swan, Mr. G. W. Manuel, chief engineer of the P. and O. Company, together with representatives from many of the leading steamship companies trading to the East. The *Haliotis*, which is 248½ft. long, with a beam of 40ft., was built by Armstrong, Whitworth & Co., and designed specially for the oil-carrying trade from Borneo. Being constructed on the trunk-deck system, she presents a somewhat unusual appearance, but her most noteworthy feature consists in the circumstance that her furnaces are fitted with an arrangement for burning refuse petroleum. They are, however, available for coal in the ordinary way, if required, it being possible to make the necessary alterations for a change of fuel in about 12 hours. From the bunkers, which are so constructed that they can be used either for oil or coal, the oil is pumped to a service tank above the boilers, whence it flows by gravity to a device at the furnace doors, where by means of a steam jet it is "pulverised" or broken into spray. Its combustion is carried out without any layer of incandescent coal.

A COMPARISON WITH COAL.

Several advantages are claimed for this method of firing the boilers of steamers. In the first place a given weight of oil develops more heat than the same weight of coal, which means a reduction in the dead weight of fuel that must be carried for a voyage. In trials with the *Haliotis* it has been found that 2·27lb. of ordinary north country coal were used for each indicated horse power per hour as compared with 1·67lb. of oil, and in the Eastern trade, where steamers have to rely on inferior Japanese and Indian coals, the comparison must work out still more in favour of the liquid fuel. For example, a boat requiring a *minimum* of 500 tons of coal for her voyage from Aden to Singapore would have an ample fuel supply with 300 tons of oil, thus largely increasing her cargo capacity. Another advantage is the speed with which fuel can be taken on board. While the rate at which coaling is performed does not as a rule exceed 60 or 80 tons an hour, 400 tons of oil can be pumped into the bunkers in the same space of time. Then, again, an immense saving of labour is claimed with the use of oil fuel. Once the burners are regulated, the supply goes on automatically, and it is said that a whole voyage may be performed without once opening the furnace doors. Hence the necessary number of stokers is greatly reduced, and, it may be added, those that are required work under much more pleasant and healthy conditions owing to the absence of coal-dust in the stokeholds. When the furnace is in full blast there is very little, if any, smoke produced—a point which might commend the system for use in men-of-war, while the fact that oil can be stowed in places which are not practicable for coal bunkers, suggests that its use might ease matters a little in the closely-packed interiors of torpedo-boat destroyers. Of course, liquid fuel has its disadvantages. The steam used in the burners involves a serious loss of fresh water—an important item on an ocean-going steamer—and it is not pretended that the direct cost in this country under present conditions is so low as that of coal, whatever may be the case in regions like that of the Caspian, where the steamers are all fired with petroleum refuse burnt in much the same way as on the *Haliotis*. And in connection with its use for the Navy one fact of supreme importance must be remembered. None of the great petroleum fields of the world are on British territory or under British control, and it would obviously be sheer folly to make our ships depend on a fuel the supply of which could not be absolutely assured.

THE BIRMINGHAM WATER SUPPLY.

A WATER FAMINE IMMINENT.

THE continuance of the long spell of hot and dry weather is occasioning a considerable amount of concern at Birmingham. Owing to the enormous increase in the population and the extension of the city boundaries, the supply of water under normal conditions does not allow much margin. The Welsh water scheme is being pushed forward as rapidly as possible, but a very long period must elapse before water from this source is available. The danger of a water famine is imminent unless there is a break in the weather very soon. The streams from which a considerable proportion of the daily supply is obtained are yielding very greatly diminished quantities, and demands have to be made upon the reservoir storage to an extent which is causing the Water Committee to look to the future with alarm. Appeals have already been issued to the public to curtail as much as possible the use of water, and the department themselves have restricted the watering of the streets to a narrow area in the centre of the city. Daily conferences take place between the city authorities upon the subject, and it is anticipated that an intermittent and restricted supply will have to be resorted to unless there is a fall of rain within the next few days. A considerable amount of inconvenience is being caused at ironworks in the district, both by the heat and the drought. Mills and forges are standing, the puddlers being unable to work the day shifts at the fires, but the nights are comparatively cool, and night turns are general. The water supply at many works has been obtained from streams, but these have dried up, and where large quantities are used temporary provision has not been possible, and the works are at a standstill. It is many years since there has been so much interruption to work on account of the weather. Traffic on the Grand Junction Canal between London and Birmingham is seriously impeded. The supply of water is so low that only reduced loads can pass along in boats. Traffic on the Aylesbury and Wendover branch is entirely stopped. Such shortness of water in the Canal has not been known for half a century. Throughout the drought the supply of canal reservoir water has been exhausted, and the Grand Junction Canal Company are now pumping back lockage water.

LOCAL GOVERNMENT BOARD REFORM.

THE second report of the committee appointed to inquire into the sufficiency of the clerical staff of the Local Government Board has been published. Witnesses from the Lancashire Council were heard in support of the scheme of devolution proposed by the County Councils Association, while representatives of the Association of Municipal Corporations and the Urban District Councils Association gave evidence strongly protesting against the transfer of such powers as those enumerated in the scheme. Among the witnesses called from Lancashire was Mr. F. C. Hulton, clerk of the County Council, who was closely examined at great length. The committee in their conclusions say:—"The hostility of the non-county boroughs and of the majority of the urban councils to the transfer of any further powers to the county councils and their preference for the control of the central authority, were declared by the witnesses examined on behalf of the above authorities to be stronger even than they were in 1889. In these circumstances we feel that, constituted as this Committee was primarily for a different purpose, we could not usefully deal with this larger and very controversial subject, but must content ourselves with recommending that the Local Government Board should, by a general order, divest themselves of such powers as they may consider expedient where they can do so without fresh legislation. As an illustration of our meaning we may mention that in our opinion a considerable relaxation is possible in the rule which obliges boards of guardians to report to the Local Government Board the appointment of a large number of persons serving under them; and we recommend that in the case of collectors of poor rates and of other contributions for the support of the poor, school attendance officers, inquiry officers, porters, industrial trainers, and superintendents of labour, amounting in the aggregate to nearly 6,000 persons, the practice may be discontinued. We fully recognise the satisfactory manner in which county councils discharge the duties entrusted to them under the Acts of 1888 and 1894, but, having regard to the fact that relations between the several authorities are not such as to render devolution possible at the present moment, we have not considered it necessary to take evidence as to whether county councils could discharge satisfactorily the additional and for the most part widely different duties which the County Councils Association would propose to devolve on them."

All this is very nice and in keeping with the traditional obscure verbosity of Parliamentary Committees, but it ends pretty much where it begins, and what good will it lead to?

Trade Notes.

Chemical Engineering and Technical Classes.—The Manchester Municipal Technical School, Princess Street, announces the following evening courses of instruction for the session 1898-99:—Mathematics—theoretical mechanics; geometry engineering—drawing and design; applied mechanics—steam and the steam engine; metallurgy—steel making, iron founding; special course on English and American lathes; bench work—wood turning for pattern makers; practical mechanical engineering; principles of mining—mine surveying; road carriage building and drawing; special course on chemistry for engineers; graphical statics—engineering surveying.

The Kent Coal Borings.—The coal boring at Brabourne, near Ashford, which has been sunk in connection with one of the Kent coal companies, has failed to strike the coal measures. The boring was sunk to a depth of 1,875 feet, where it passed into the older geological formations.

Fire at a Bleach Works.—The extensive bleach and print works of Messrs. Crawford and Sons, Limited, at Dunmurry, near Belfast, have been totally destroyed by fire. The damage done is estimated at several thousand pounds, and 150 operatives have been thrown out of employment.

Personal.—We learn that Mr. Otto Fuerst, of 7, Rödingsmarkt, Hamburg, has been appointed sole representative in Germany for Messrs. Allen and Hanbury's food lozenges and "tabloid" preparations, for the sale of which the company has opened a depôt in Hamburg. Descriptive pamphlets (in German) may be had from Mr. O. Fuerst on application.

Fatal Lamp Accident.—Mrs. Emma Harding, residing at Brownlow Mews, Holborn, London, was last week carrying a lighted petroleum lamp upstairs when it exploded. Her husband went to her assistance, but both were so terribly burned that they had to be conveyed to the Royal Free Hospital, where the woman died from the effects of the burns and shock to the system.

Fatal Explosion of Carbonic Acid Gas.—A serious explosion occurred in the bottling room at Messrs. Batey's Mineral Water Factory, Kingsland-road, London, on Monday afternoon. It appears that a tube containing compressed carbon dioxide, used in the manufacture of mineral waters, suddenly exploded. Twenty-two men were working in the room at the time, five of whom were so seriously injured that they had to be removed to the German Hospital in Dalston. Two of them are in a critical condition. On a search being afterwards made in the room where the explosion occurred, one man was found under some débris dead. The room was completely wrecked.

Ice at £5 a Ton.—The remarkable dearth of ice in London, which has probably been brought about partly by the demand during the great heat of the past few weeks and partly by the want of water, shows how important it is to have at hand a sufficient quantity of that article—in fact, it is an absolute necessity of modern life, for without its aid thousands of tons of perishable produce would become useless daily. The remarkable price of £5 per ton has been paid for ice in London. Other factors in the scarcity have been the mild winter in Norway and the increased demand for ice by Germany. These facts show the wisdom of the Liverpool Riverside Cold and Ice Storage Company, Limited, in embarking on the project for the supply of ice and cold storage. There can be little doubt that this is a trade which will continually grow, and one that will grow by being catered for.

Standards of Purity for Sewage Effluents.—Discussing "Standards of Purity for Sewage Effluents" at the British Association meeting last week, Dr. S. Rideal pointed out that the majority of these standards are arbitrary and artificial. But a calculation of the proportion of nitrogen in its oxidized form which are harmless, and its unoxidised forms, which are odorous and sometimes deleterious, would denote the extent to which the sample had been purified. The number obtained is termed the "percentage of purification," and ranges from nothing in raw sewage to 97·6 for a deep well in chalk. Moreover, with the aid of bacteria, the oxygen combined with nitrogen, that is in the form of nitrates and nitrites, is capable of supplementing the free dissolved oxygen in the destruction of the organic matter. From these considerations a formula is deduced embodying all the natural *data* for the conditions of discharge of an effluent into a stream, including the flow and aëration of the latter, the volume of oxygen required, and the "available oxygen of the effluent," the result being a "factor of safety," which must never be below unity. It is concluded that an effluent which has been properly prepared and is in an active state of wholesome bacterial change under the above conditions of free and potential oxygen, is clear and nearly free from odour and may be safely discharged into any river of *moderate* volume. Some discussion followed.

Liverpool University College Extensions.—The new Laboratories of Physiology and Pathology, which University College, Liverpool, owes to the generosity of the Rev. S. A. Thompson Yates, will be opened on October 8th by Lord Lister, president of the Royal Society. By his benefaction, Mr. Thompson Yates has strengthened the medical school of the college in a very marked degree.

Coal Trade Notes.—At a meeting of the miners employed in the collieries of the Bridgewater Trustees held at the Bull's Head Hotel, Walkden, on Thursday, it was decided to reject the offer of the employers of an advance of 2½ per cent. It was further resolved to instruct their representatives to ask for an immediate advance of 10 per cent. and in the event of the coalowners refusing to concede this advance, to give fourteen days' notice to cease work. The Dukinfield Coal and Cannel Company have posted notices terminating the services of their employes next Wednesday. Over 1,000 are affected.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols if anything are inclined to be easier, 90's now being quoted 9d. to 9½d. and 50/90's, 9½d. The feature of the week has been a slight hardening in the price of crude carbolic acid, 60%, which is now quoted 2s. Crystals are firm, but unchanged in price. Naphthas are dull and slow of sale. Anthracene does not tempt buyers even at 4d. for 30% A and 3d. for B. The improvement in pitch is maintained at 25s. f.o.b. East Coast. Forward 1899 delivery, 25s. 6d.

Sulphate of ammonia has been dull during the week, for though the inquiry has been good, buyers have hung back for a fall. Beckton has has come into the prompt market again at £9. 17s. 6d. London outside makes close quiet at £10.; Liverpool, £10. 1s. 3d.; Hull, £9. 17s. 6d.; and Leith, £9. 18s 9d. For forward, Beckton is asking £9. 15s. October/December.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is moderately active. Prices on the whole are steady for prompt and early deliveries, but on forward business there is a lower tendency in caustic soda and bleaching powder, and considerable business has already been concluded for deliveries over next year. For caustic soda the current spot quotations f.o.b. Liverpool are—for 77% £7. 17s. 6d. per ton, 74% £7. 12s. 6d., 70% £7. 2s. 6d., 60% £6. 2s. 6d. per ton. Ammonia alkali (58%) £4. 2s. 6d., bags, f.o.r. makers' works, and for contracts over 1899 £3. 17s. 6d. per ton. Saltcake (95%) in strong demand at 26s. per ton, in bulk, f.o.r. Bleaching powder (softwood), prompt, £5. per ton, f.o.r., and forward business done at £4. 15s. per ton. Chlorates of potash and soda are steady at 3⅝d. for potash and 3⅞d. per lb. for soda. Soda crystals and bicarbonate are without change. Sulphate of copper is dearer, and lowest quotations for early to Spring shipments are £17. to £17. 10s per ton, f.o.b. White powdered arsenic is in active demand for export, and business done at £17. per ton f.o.b. Potash, caustic and carbonate, are in good, steady demand and prices are firm. Bichromates steady at 2¾d. per lb. for soda and 3½d. for potash. Oxalic acid, 2⅝d. to 3d. per lb. in quantity. Nitrate of soda is a steady market, with firmer tone. Yellow prussiate of potash is steady at 6⅝d. Prussiate of soda firm at 5⅛d. per lb. Brown acetate of lime in better demand at £5. 2s. 6d. to £5. 5s., Manchester district. Grey, £7. per ton, c.i.f. Acetate of soda dearer at £12. per ton. Acetic acids rather lower; other acetates unchanged. In the general demand for chemicals there is as yet no sign of improvement.

REPORT ON MANURE MATERIAL.

There continues to be a fair amount of inquiry, and prices all round are maintained.

Further considerable sales of high grade Florida Rock are reported to be made at full prices to the Continent, and there is now very little available for shipment before the second half of 1899. There is also a good demand for other descriptions of rock for the Continent, but the U.K. is not buying.

Bone meal is very firmly held at £4. 15s. per ton, ex store Liverpool and for shipment. There is also inquiry for cargoes of River Plate bones, and £4. 12s. 6d. per ton is probably the nearest value for shipment to direct U.K. ports.

Nitrate of soda is steady at 7s. 7½d. per cwt. on spot.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron firm: Scotch warrants closed at 48s. 5d.; Middlesbro', 43s. 1d. cash; and hematite,

54s. 5½d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed £52. 1s. 3d. to £52. 6s. 3d. cash, and £52. 5s. to £52. 10s. three months. Tin firmer: Straits closed at £74. 3s. 9d. to £74. 13s. 9d. cash, and £74. 8s 9d. to £74. 18s. 9d. three months; Australian, £75.; English ingots, £76. 15s. to £77. Lead quiet: Spanish, £13.; English, £13. 7s. 6d.; Silesian spelter, ordinary, £21. 17s. 6d. to £22. Nickel, 1s. 2½d. Antimony, £37. Quicksilver: First hands, £7.; second hands, £6. 19s. 6d. *Copper shares* steady: Cape, 4⅝ to 4¾; Copiapo, 2¼ to 2⅜; Libiola, 2 to 2¼; Mason and Barry, 3⅝ to 3⅞; Rio Tinto, 28 11/16 to 28 13/16; Tharsis, 6½ to 6¾.

GLASGOW, TUESDAY.—Market firmer, and a small business; Scotch done at 48s. 2½d. to 48s. 3½d. cash, and 48s 3d, 48s. 4½d., and 48s. 4d. month; buyers, 48s. 3d. cash; sellers, ½d. more. Cleveland done at 43s. cash; buyers, 43s. cash; sellers, 43s. 0½d. Cumberland hematite done at 54s. 6d. month; buyers, 54s. 3d. cash; sellers, ½d. more. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is firm, but quiet, there being very little doing. Olive keeps steady, without any change in values Linseed is firm, Liverpool makes in exports casks being quoted 18s. 3d. to 18s 6d. cwt. Cottonseed steady, with Liverpool refined at 15s. 9d. 16s. 3d. Castor oil keeps quietly steady, with good seconds Calcutta well held for 3 7/16d. per lb.; first pressure French 3d. ex quay to 3 1/16d. store; Madras 3 1/16d. Tallow is in better request, and sales of South American beef have been done at 22s. 6d. to 23s. Resin is in fair request and all grades are well maintained in price. Spirits of turpentine are held for 23s. cwt. and in fair demand thereat. Petroleum is firmer, American being quoted 6d. to 7¼d., and Russian refined 5d. to 5¼d. per gallon.

CAKES.—American Western linseed have a steady market on the spot, and moderate sales have been concluded at previous rates, viz., £6. 7s. 6d. to £6. 12s. 6d., and Liverpool makes also rule very steady, with a continued fair inquiry experienced from consumers at £7. 5s. to £8. 10s. per ton, according to brand. American decorticated cottonseed are without any alteration to report, with sellers still quoting £5. 7s. 6d. to £5. 15s. for good to choice brands, according to quality, with a quiet business doing thereat; whilst Liverpool makes have a moderate sale, with holders steady in their ideas at £5. 15s. to £6. 10s. per ton. Liverpool undecorticated makes are still quoted at £3 18s 9d. to £4. 10s. per ton, according to brand, and a fair consumptive trade has been concluded. Egyptian is in improved request, and fair sales are making in spot parcels of prime quality, and the quotation is steadily maintained at £3. 13s. 9d. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The general aspect of trade here continues to improve. The Hull and Barnsley traffic returns for the ten weeks of the half year have been £90,675. against the corresponding half a year ago of £75,628., being an increase of £15 047.; this, however, is largely caused by the strike in South Wales, and cannot be expected to continue. The prices ruling in the corn market are very disappointing. Prices of oils, however, have been steadily improving during the week, the values of linseed and cotton oils being up fully 10s per ton upon last week's quotations. Linseed oil is quoted firm at 16s. 4½d. per cwt., spot, naked; forward (Oct.-Dec.), 16s., paid; Jan.-April, 15s. 9d.; boiled and refined £1. to £1. 10s. per ton extra. Refined cottonseed oil, spot, naked, 14s. 9d. per cwt.; forward (Nov.-April), 13s. 3d., sellers; crude, spot, 13s. 6d.; Nov.-April, 12s.; barrels £1. 10s. and ordinary casks £1. per ton extra. Castor oil, extracted here—cold drawn (pharmaceutical), in barrels, 30s. 6d. per cwt.; in in cases 3¼d. per lb.; pure first pressure 28s. per cwt., in barrels, 3 7/16d. per lb. in cases; second pressure 27s. per cwt., in barrels, 3 1/16d. per lb. in cases. Olive oil value unchanged and slow sale. Olive oil soap continues to rule high, with no prospect of a reduction for a few months. Oleines £18. 10s. per ton for brown, f.o.b. Continental ports. Resins unchanged. Tallow nominal. Yorkshire brown grease £8. to £9. Cod oils £16. to £19. per ton.

CAKES.—The mills continue only partially employed, and seeds continue very firm. Linseed cakes quiet but firm: 95% pure, £7. 7s. 6d. to £7. 10s. per ton. Oilcakes (linseed) £6. 7s. 6d. to £6. 10s per ton; Russians, £6. 15s. to £7.; Americans, £6. 10s. to £6 12s 6d. Cotton cakes steady, best makes, £4. to £4. 1s. 3d.; seconds, £3. 17s. 6d. to £3. 18s. 9d; decorticated, £6. Rape cakes (Black Sea), £3. 17s. 6d. to £4. 2s. 6d.

PAINTS.—Business continues good, but only a quiet export demand. Ordinary colours in oil from £10. per ton. Ready-mixed paints from £24 per ton. Dry mineral colours £3. to £7. Carbolic sanitary powder, 20%, £4. 10s.; 15%, £4. 5s.; 10%, £3. 15s. Sanitary fluid from 10d. per gallon. Black varnish £5. 10s. per ton, in barrels.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

On the whole the general market is quiet, not to say idle. Approach of the close of the season for Baltic despatches causes some little show of push in that department, but slowness is the rule, at prices offering hardly anything of change. Sulphate of copper is firmer a little; and chlorates also, as a result of an effort said to be in progress on the part of the makers for some arrangement between themselves. Sulphate of ammonia has all the week held rather to the droop, though very reluctantly so, and the prompt Leith quotation now is £9 17s. 6d. to £10. Some makers have faith in an early, if perhaps only partial, recovery, as the end of the month approaches. Prices in the mineral oil, naphtha, and solid paraffin sections all remain untouched in the meantime, but this shale manufacture is uneasy, because of the attitude of the shale miners, who have adopted measures of force for compelling a wages advance, which the masters say the industry cannot afford.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 15s. 0d, 70/72° £7. 2s. 6d, 60/62° £6. 2s. 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 25s. 0d.; borax, English refined, £13. 10s, and boracic acid, £25 nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s.. nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d nett, f.o.b. Glasgow); chlorate of potash, 3½d less 5%, Liverpool; nitrate of soda, 7s. 7½d. to 7s. 9d; sulphate of ammonia, £9. 17s. 6d. to £10, prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port; sulphate of copper, £17., less 5% Liverpool; paraffin scale, hard, 1 3/16d. to 1½d. per lb., and soft 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin spirit (naphtha), 6½d. to 7d. per gallon; paraffin oil (burning), No. 1, 6d., and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were *nil.*

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical market is still dull and prices generally remain unaltered. Soda crystals are £2. 12s. 6d. per ton, gross weight, locally. Caustic, 76/77%, £8. per ton and 70%. £7. 5s. per ton. Sulphur steady at £4. 15s. per ton.

Bleaching powder, softs, £5 5s. per ton, nett; do. hards, £5. 10s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 5s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. per ton, nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees. Shipments have been fairly good lately.

COALS.—Market is again quieter and prices drooping, with the exception of gas coals, which, with the approach of winter, are increasing in consumption. Coke is steady and rather scarce. Best Northumbrian steam, 10s. 9d. to 11s. per ton; second qualities, 10s. to 10s. 6d. per ton; small steam, 6s. to 7s. per ton; bunker coals weaker, 9s. 3d. to 9s. 9d. per ton; gas coals firmer, 10s. to 10s. 6d. per ton; coke steady, 18s. to 20s. per ton.

New Companies.

Anglo-Continental Chemical Works, Ltd.—Capital £4,000. in 3,850 £1. ordinary and 3,000. 1s. founders' shares. This company has been formed to acquire, develop and turn to account certain rights for the manufacture and sale in England and elsewhere of chemical products. The number of directors is not to be more than 7; the subscribers are to appoint the first; qualification, £100.; remuneration as fixed by the company.

Cecil Wren & Co., Ltd.—Capital £10,000. in £1. shares. This company has been formed to acquire the business carried on at Eaglescliffe, co. Durham, as Cecil Wren and Co. and to carry on the business of vinegar brewers and distillers, and manufacturers of and dealers in soap, varnish, chemicals, etc. The number of directors is not to be less than 3 nor more than 7; the subscribers are to appoint the first; qualification, £100.; remuneration as fixed by the company. Registered office, Eaglescliffe Vinegar Brewery, Yarm-on-Tees.

Kurtz, Ltd.—Capital £100 000. in £10. shares. This company has been formed to acquire the right to use the works in Liverpool of Charles Kurtz and Sons, tar distillers, and to manufacture, carbonise, distil, and manipulate coal, oxides, ammoniacal liquor, acids, and other chemicals. The subscribers to the memorandum of association are:—J. J. Holden, 73, Albert-road, Southport, chemical manufacturer; G. H. Holden, Heaton Mersey, Manchester, chemist; A. N. Holden, 73, Albert-road, Southport, chemist; R. H. Clayton, 37, George-street, Cheetham Hill, Manchester, chemist; T. Royle, 41, George-street, Cheetham Hill, Manchester, chemist; J. Craven, jun., 6, Halliwell Lane, Cheetham Hill, Manchester, chemist; W. Archdale, 43, Oldham-road, Miles Platting, Manchester, chemist.

Pineotas Soap & Disinfectants Co, Ltd.—Capital £5,000. in £1. shares. This company has been formed to acquire and carry on the business of soap and disinfectant manufacturers now carried on by J. Leith and W. Mason, at 7, Upper Brook-street, Manchester, as The Pineotas Disinfectant Co.

Riverside Cold Storage & Ice Co., Ltd.—Capital £60,000. in £1. shares (30,000 6 per cent. cumulative preference). This company has been formed to adopt an agreement with F. Hilditch, and to carry on the business of warehouse keepers, cold storage proprietors, ice manufacturers and merchants, shipowners, etc. The subscribers to the memorandum of association are:—De F. Pennefather, 1, Tithebarn-street, Liverpool, merchant; M. Amoroso, 26, Chapel-street, Liverpool, shipowner; H. R. Meyer, B16, Exchange Buildings, Liverpool, secretary; J. Blyth, 9, Corn Exchange Buildings, Liverpool, merchant; R. Grahame, 7, Tithebarn-street, Liverpool, cotton broker; F. H. Pickworth, 6, Bixteth-street, Liverpool, cotton broker; F. Hilditch, 5, Cook-street, Liverpool, chartered accountant.

Volcanic Furnace & Cement Co. Ltd. Capital £50,000. in £1. shares (1,000 founders'). This company has been formed to acquire certain patents for the manufacture of cement, paint, and plaster, to adopt an agreement with H. W. Maynard and W. H. P. Henry, and to manufacture and deal in cement, plaster, paint, artificial stone, bricks, etc. The subscribers to the memorandum of association are:—H. W. Maynard, 34, New Bridge-street, E.C., merchant; W. H. P. Henry, 3, Unwin Mansions, Queen's Club Gardens, W., secretary; R. Stone, Beaconsfield, Lewin-road, Streatham, engineer; W. Goff, 79½, Gracechurch-street, E.C., merchant; P. W. Loughran, 34, New Bridge-street, E.C., agent; G. O. Scott, 5, Woodville Gardens, Ealing, W., gentleman; G. Henderson, 60, Ludgate Hill, E.C, paper agent.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 10th.

Acetic Acid—
Holland, 50 pks. Phillips & Graves

Acetone—
Germany, 4 cks. L. & I. D. Jt. Co.
,, 6 dms. T. H. Lee

Alkali—
Belgium, 100 c. H. Wallace & Co.
France, 50 J. Barber & Co.
,, 280 J. Harrison
,, 50 Spies Brs. & Co.

Alum—
Holland, 203 pks. J. White

Ammonium Chloride—
Holland, £52 H. Lorenz

Antimony Ore—
France, 1 t. Girard Brs. & Co.
Straits, 73 H. Grey, Junr.

Arachide Oil—
Holland, 6 cks. Phillipps & Graves

Arsenic—
France, 7 pks. J. Harrison

Asbestos—
Italy, £576 C. Poulter, Ld.
Germany, 9 Craven & Co.
Italy, 293 British Asbestos Co.

Barium Chloride—
Germany, £54 Petri Bros.

Barytes—
Holland, 90 pks. Taylor Brs.
,, 247 W. Harrison & Co.
Belgium, 219 ,,
,, 112 J. L Lyon & Co
,, 213 Burrell & Co.

Bleaching Powder—
Germany, 68 cks. J. M. Steel & Co.

Bleaching Soda—
Germany, 240 c. H. Lambert

Bone Meal—
E. Indies, 200 t. Hollinghurst & Co

Bones—
Belgium, 2 t. Sawer, Sons & Co.
N. Zealand, 3 Culverwell, Brooks & Co.

Caoutchouc—
Madagascar, 30 c. Procter Brs.
Russia, 188 Chautard & Christenden
Germany, 320 Prop. Bull Wf.
E. Indies, 125 Ralli Brs.
Ceylon, 13 *J. A. Haddon & Co.*
W. Indies, 105 Prop. Bull Wf.
E. Indies, 22 S. Figgis & Co.
Straits, 49 Elkan & Co.
,, 607 E. Boustead & Co.
,, 699 L. & I. D. Jt. Co.
,, 195 Prop. Bull Wf.
,, 189 Gilman Brs. & Co.
,, 360 Huttenbach & Co.
,, 85 Anderson, Weber & Smith
Zanzibar, 18 Hale & Son

Carbolic Acid—
Germany, 38 pks. J. G. Back
,, 50 Blagden, Waugh & Co.

Castor Oil—
Italy, 10 cs. Hodgkinson, Clarke & Co.
France, 10 cks. F. Boehm

Caustic Potash—
France, 20 dms. Petri Brs.

Caustic Soda—
Germany, 6 c. Butler's Wf., Ld.

Chemicals *(otherwise undescribed)*
France, £15 Mory & Co.
Germany, 220 L. & I. D. Jt. Co.
U. States, 100 pks. Seaward Brs., Ld.
Germany, £59 Craven & Co.
,, 55 ,,
,, 18 Wilson & Co.
Belgium, 169 T. H. Lee
,, 27 John Cockerill Line
Germany, 14 Blagden, Waugh & Co.
Belgium, 16 O. Scholzig
Holland, 43 T. H. Lee
,, 16 Phillipps & Graves
Germany, 9 Butler's Wf., Ld.
,, 354 A. & M. Zimmerman
,, 76 R. W. Greeff & Co.
,, 60 Phillips & Graves
Holland, 12 H. Lorenz
U. States, 1,240 S. C. Jones

Copper Sulphate—
Germany, £45 Charles & Fox

Cream of Tartar—
Italy, 10 pks. B. & F. Wf. Co.
Spain, 13 ,,
France, 10 W. C. Bacon & Co.
,, 22 B. & F. Wf. Co.
,, 50 C. Christophersen & Co.
Italy, 11 Fellows, Morton & Co.
France, 5 M. Ashby, Ld.
,, 2 C. Atkins & Nisbet

Disinfectants—
Germany, £24 A. & M. Zimmermann

Dyestuffs—
Argois
Cape, 25 pks. Hammond & Co.
Spain, 55 Thames S. T. & L. Co
Cochineal
Canaries, 4 pks. Swanston & Co.
Extracts
France, 106 pks. Bennett S. S. Co.
U. States, 105 L. & I. D. Jt Co.
France, 50 B. & F. Wf. Co.
Belgium, 30 J. Grieg
Germany, 200 Furest Brs
Canada, 55 cks. Boutcher, Mortimore & Co.
U. States, 50 pks. W. C. Barnes & Co
France, 50 J. Levenstein & Sons
,, 1 Burnett Brs. & Sons
Gambier
Straits, 158 bgs. Beresford & Co.
Myrabolams
E. Indies 81 pks. Baxter & Hoare
,, 600 Hoare. Wilson & Co
,, 620 bgs. L. & I. D. Jt. Co.
Shumac
Italy, 10 pks. T. S. Harris & Co
Tanners' Bark
Adelaide, 56 t. Baxter & Hoare
,, 69 H. Devitt & Co.
Belgium, 40 P. A. Hughes
,, 12 Leach & Co.
Natal, 75 A. & W. Nesbitt
W. Indies, 1 Flack, Chandler & Co.
Adelaide, 25 G. & H. Green
Turmeric
China, 363 pks. Dalton & Young
Valonia
A. Turkey, 145 t. Boutcher, Mortimore & Co.
,, 20 M. D. Co.

Dyestuffs *(otherwise undes.)*—
U. States, £17 Carter, Paterson & Co.
Denmark, 1 pk. Masters Brs.

Farina—
France, 1 pk. E. Flageollett & Co.
Holland, 100 pks. J. Barber & Co.
Italy, 1,095 bxs. Wrightson & Co.

Glucose—
France, 200 pks. 220 cwt. Trier, Meyer & Co.
U. States, 450 1,903 J. Kitchen, Ld.
,, 325 1,090 L. & Til. L. C. & D Co.
France, 200 200 W. E. Cole
Canada, 249 250 T. M. Duche & Sons
France, 200 200 Barrett, Tagant & Co.
U. States, 675 1,462 Ohlensch-lager Brs.
,, 250 250 Trier, Meyer & Co.
,, 6,065 8,362 R. G. Hall & Co.
,, 2,000 2,000 E. Thompson & Co.
Canada, 250 250 R. G. Hall & Co.
Holland, 95 80 Phillipps & Graves
U. States, 100 567 H. Johnson & Sons
,, 50 290 H. Keiller & Son
,, 200 1,138 Deering & Robottom
,, 2,190 2,190 L. & I. D. Jt. Co.

Glue—
France, £48 Mory & Co.
Germany, 148 L. & I. D. Jt. Co.
Belgium, £3 John Cockerill Line
France, 48 Burnett, Brs. & Sons
U. States, 3 L. & I. D. Jt. Co.
,, 41 Armour & Co.
Germany, 30 Craven & Co
Holland, 2 Ryley & Co.
,, 17 T. H. Lee
,, 78 W. Harrison & Co.
U. States, 100 Wilsons & Furness Co.
Belgium, 617 R. G. Hall & Co.
Holland, 91 M. Benscher
,, 9 A. G. Robinson & Co.

Glue Stock—
E. Indies, 180 bgs. J. Allan & Co.
,, 1 bl. P. Heydmann & Son
N. Zealand, 6 Culverwell, Brooks & Co.

Glycerine—
France, £446 D. & W. Gibbs
,, 340 J. W. Cook & Co., Ld.

Infusorial Earth—
Germany, £7 L. & I. D. Jt. Co.

etate—
, £130 F. Boehm
—
58 pks. Spies Brs. & Co.
16 D. Storer & Sons
ese—
18 t. C. Hof & Co.
—
3 t. T. Ronaldson & Co.
Alcohol—
2,160 gls. W. Iszard
2,400 Tingle, Jacobs, & Co.
100 T. Jones & Co.
2,025 H. Wallace & Co.
, £648 W. M. Smith & Sons
664 E. Davis & Co.
, 1,740 W. M. Smith & Sons
l—
500 brls. 3 066 c. J. Forsey
90 450 J. Kitchin, Ld
490 2,500 J. R. Francis & Co.
1 cs. 4 Allan Brs. & Co.
150 brls. 1,659 Ohlenschlager
150 bskts. Brs.
45 pks. J. L. Lyon & Co
19 Phillipps & Graves
187 W. Harrison & Co.
te Rock—
250 t. West & Penrose
256 Odams Manure & Chemical Co
6 H. & E. Albert
250 A. Hunter & Co
42 cks. R. L. Archibald
n Ore—
3 c. H. Grey, junr.
go—
163 cs. E. & T. Pink
54 brls. Phillipps & Graves
6 cks. Brown & Elmslie
62 B. Gallaway
60 brls. R. G. Hall & Co.
108 Marshall & French
48 J. Thredder, Son, & Co
95 H. J. Perlbach & Co.
656 J. Thredder, Son, & Co.
10 Powell, Jones, & Co.
40 cs. Lunham & Moore
m Bicarbonate—
9 pks. A. & M. Zimmermann
m Bromide—
2 cs. R. W. Greeff & Co.
m Carbonate—
200 c Petri Brs.
100 A. & M. Zimmermann
110 J. A. Reid
80 Charles & Fox
m Oxalate—
8 cks. R. W. Greeff & Co.
m Permanganate—
1 ck. Butler's Wf., Ld.
5 pks. "
m Phosphates—
2 pks. Butler's Wf., Ld.
m Prussiate—
24 cks. J. Owen
m Sulphate—
300 bgs. F. W. Berk & Co., Ld.
—
1,969 t. C. Tennant, Sons, & Co.
3 cks. J. Owen
3 R. Ingram, Clark, & Co.
700 F. & S. Chiesman & Co.
Acid—
18 pks. Butler's Wf., Ld.
e—
30 cks. J. Hall & Son, Ld.
140 bgs. Lucas & Spencer's Wf.
£64 Phillipps & Graves
10 Barron, Harvey, & Co.
e—
£300 J. W. Cook & Co., Ld.
Hyposulphite—
40 kgs. J. Owen

Sodium Oxalate—
Holland, 10 cks. R. W. Greeff & Co.
Sodium Phosphate—
Belgium, 106 c. A. Boake, Roberts, & Co.
Starch—
U. States, 199 pks. R. G. Hall & Co.
" 220 C. Tennant, Sons, & Co.
" 250 W. G. Taylor & Co., Ld.
Germany, 6 Butler's Wf., Ld.
" 157 Phillipps & Graves
Belgium, 160 Becker & Wagner
" 740 C. Tennant, Sons, & Co.
" 30 Leach & Co.
" 460 T. H. Lee
" 400 Seaward Brs., Ld.
Germany, 320 "
Belgium, 770 F. Claydon & Co.
" 40 Taylor Brs.
" 773 T. Ronaldson & Co.
France, 140 B. & F. Wf. Co.
Stearine—
Belgium, 63 bgs. H. Hill & Sons
U. States, 10 brls. L. & I. D. Jt. Co.
Talc—
Germany, £304 A. B. Curtis & Co.
France, 40 Blackwell & Co.
Tannic Acid—
Germany, 10 pks R. W. Greeff & Co.
Tar—
N. Russia, 15 brls. F. & S. Chiesman & Co.
Tartaric Acid—
Holland, 21 pks. B. & F. Wf. Co.
Turpentine—
U. States, 3,040 brls. Nickoll & Knight
Portugal, 53 H. Bertram & Co
Russia, 52 D. Smith
Ultramarine—
Germany, 10 pks. Steinhoff, Sons, & Co.
Holland, 5 J. Barber & Co.
Varnish—
France, 25 pks. Suter, Hartmann Comp. Co.
" 1 Girard Brs.
U. States, 60 L. & I. D. Jt. Co.
" 1 Wingate & Johnson
" 93 J. R. Francis & Co.
White Lead—
Holland, 59 pks W. Balchin
" 99 Burrell & Co.
Norway, 40 Johnsen & Jorgensen
Belgium, 55 T. & W. Farmiloe, Ld.
Holland, 49 "
Germany, 51 D. Storer & Sons
" 43 Wilkinson, Heywood, & Co.
" 40 Hore & Scrivener
Holland, 22 A. Zumbeck & Co.
Belgium, 2 J. L. Lyon & Co.
Wood Pulp—
Sweden, 400 pks. Henderson, Craig, & Co.
" 520 W. E. Bott & Co.
" 816 W. G. Taylor & Co., Ld.
" 896 W. D. Cork
" 237 A. Reed & Co.
Canada, 322 "
" 923 Becker & Co.
Holland, 52 C. S. Lovell
Norway, 1,287 Johnsen & Jorgensen
" 3,310 London Paper Mills Co.
" 77 M. Dk. Co.
Belgium, 2,129 J. Harrison
Zinc Oxide—
U. States, 300 pks. M. Ashby, Ld.
Holland, 2 "
" 50 J. Matton
Germany, 26 O'Hara & Hoare
" 4 Butler's Wf., Ld.
" 500 Soundy & Sons
" 60 Prprs. Dowgate Dk.
Zinc Sulphate—
Germany, £68 Burgoyne & Co.
Zinc White—
Holland, 75 pks. Burrell & Co.
" 80 Spies Brs & Co.

LIVERPOOL.

Week ending September 8th.

Barytes—
Antwerp, 70 cks. 150 bgs.
Bone Ash—
B. Ayres, 200 bgs. W. B. Dickinson
" qty. Haycroft & Pethicol

Bone Meal—
Bombay, 2,160 bgs. W. & R. Graham & Co.
" 2,133 dholls
Bones—
B. Ayres, 126 bgs.
Natal, qty. A. Fernandes & Son
Borate of Lime—
Hamburg, 1,875 bgs.
Castor Oil—
Calcutta, 427 cs.
Chemicals *(otherwise undescribed)*
Antwerp, 5 brls.
Chrome Ore—
Volo, 300 t. Geo. G. Blackwell, Sons & Co.
Colours—
Bremen, 1 ck
Hamburg, 2 cs.
Cream of Tartar—
Bordeaux, 44 cks.
Marseilles, 2 brls.
Oporto, 3 cks.
Dyestuffs—
Argols
Bordeaux, 5 cks.
Cutch
Rangoon, 750 bxs.
Extracts
Nantes, 780 cks. Boutcher, Bacon & Co
Genoa, 250 cs.
Fiume, 227 brls. Oak Extract Co., Ld.
Fustic
Kingston, 1,576 pcs. Gillespie & Co.
" 275
" 25 E. Chaloner & Co.
Logwood
B. Ayres, 59 logs
Shumac
Palermo, 325 bgs. 25 bls.
Glucose—
New York, 150 brls.
Boston, 750
" 50 T. M. Duche & Co.
Philadelphia, 1 brl.
Glue—
Boston, 31 pks.
Antwerp, 10 bls.
New York, 1 brl. E F. Callister & Son
Fiume, 4 cks.
Glycerine—
B. Ayres, 3 dms.
Lead Oxide—
Bordeaux, 42 bgs.
Limestone—
Antwerp, 1 cs. J. T. Fletcher & Co.
Linseed Oil—
Philadelphia, 2 cs. Wood & Bedford
Lithopone White—
Hamburg, 50 cks.
Manganese Ore—
Coquimbo, 1,500 t.
Poto, 1,500
Molasses—
N. Orleans, 260 brls.
Ochre—
Marseilles, 89 cks. 120 brls.
Paint—
New York, 1 brl. J. Mathew & Co
Boston, 2 cks. Pearson, Bennion & Co.
Montreal, 1 bx. J. Bennett
Paraffin Scale—
New York, 500 brls. Anglo-Am. Oil Co.
Rangoon, 80 bxs.
Philadelphia, 200 brls.
Phosphates—
Bona, 2,800 t.
Pt. Royal, 2,460
Pyrites—
Huelva, 1,139 t. H. Bath & Sons
Soap—
Boston, 20 cs. J. Thompson
New York, 1,000 bxs. B. J. Babbit
Syra, 2 bgs. Ralli Brs.
New York, 50 bxs. H. A. Lane
Marseilles, 327 15 cs. 220 bgs.

Soap Lye—
Marseilles, 80 dms.
Soapstone—
Bordeaux, 200 bgs. Geo. G. Blackwell, Sons & Co.
tarch—
Boston, 125 bgs. J. Glen
" 400
Bremen, 180 cs.
Antwerp, 286 J. T Fletcher & Co
" 130
Hamburg, 60 bls.
Stearine—
Antwerp, 26 bgs.
Tallow—
New York, 175 tcs. Colby & Co.
B. Ayres, 150 pps. 1,644 cks.
Philadelphia, 60 tcs.
Baltimore, 500
Varnish—
New York, 14 cs. E Prentis
" 1 brl. R. R. Minton & Co.
Waste Salt—
Hamburg, 10 brls.
White Lead—
Antwerp, 10 brls.
Wood Pulp—
New York, 46 cs. Tillotson & Co.
Montreal, 1,746 bls. A. Rice & Co
Boston, 540 300 rolls
Zinc Ashes—
Boston, 37 brls.
Philadelphia, 62
Zinc Oxide—
New York, 100 brls.
Antwerp, 65

MANCHESTER.

Week ending September 10th.

Alizarine—
Rotterdam, 44 cks.
Aniline Salts—
Rotterdam. 20 cks.
Antimony Bifluoride—
Hamburg, 2 cks.
Asbestos—
Rotterdam, 7 bls.
Barytes—
Antwerp, 105 bgs.
Cement—
Antwerp, 220 bgs.
Colours—
Hamburg, 2 cks. 3 cs.
Rotterdam, 28 19 18 bxs. 1 kg. 53 brls.
Extracts—
New York, 59 brls.
Farina—
Rotterdam, 30 brls.
Stettin, 750 bgs. Browne, Geveke, & Co.
" 390
Glucose—
New York, 50 brls.
Stettin, 1,000 bgs.
Glue—
Antwerp, 59 pks.
Rotterdam, 52 bgs.
Stettin, 90
Indigo—
Rotterdam, 1 cs.
Limestone—
Antwerp, 8 cs. J. T. Fletcher & Co.
" 8 3 crts.
Ghent, 6
Litharge—
Rotterdam, 1 ck.
Ochre—
Hamburg, 8 cks.
Oxalic Acid—
Stettin, 24 cks.
Paraffin Scale—
New York, 400 brls.
Potash—
Antwerp, 20 dms.
Rotterdam, 7 cks.
Potassium Oxalate—
Rotterdam, 5 cks.
Rosin—
New York, 505 brls.
Saltpetre—
Hamburg, 40 kgs.

Starch—
Antwerp, 3 bgs.
Rotterdam, 180 cs.
124
Stearine—
Antwerp, 6 bgs.
Tin Oxide—
Antwerp, 10 cks.
White Lead—
Rotterdam, 10 cks.
Wood Pulp—
Christiania 2,780 bls. W. H. Ingram
Drammen, 403 "
Fredrikshald, 2,860 W. Gallagher & Son
Gefle, 1,890
Gothenburg, 725
Hamburg, 10 218 pks.
Kallero, 3,034
Sarpsborg, 2,358 Kellner, Partington & Co.
" 1,802
Skien, 960 W. H. Ingram
Stettin, 604 bdls.
Zinc Ashes—
Antwerp, 13 cks.
Zinc Oxide—
Antwerp, 10 brls.
New York, 100
Rotterdam, 20
Zinc White—
Rotterdam, 10 cks.

HULL.

Week ending September 10th.

Acetic Acid—
Rotterdam, 9 blns. Hull & Netherlands S. S. Co
Alkali—
Antwerp, 10 cks Wilson, Sons, & Co., Ld.
Antimony—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Barytes—
Bremen, 12 cks.
" 100 bgs. Storry, Smithson, & Co.
Rotterdam, 43 cks. Hull & Netherlands S. S. Co.
Chemicals *(otherwise undescribed)*
Antwerp, 10 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 10 pks. "
Hamburg, 5 cs. Bailey & Leetham, Ld.
Colours—
Antwerp, 49 cks. Wilson, Sons, & Co., Ld.
Bremen, 2 cs. Veltmann & Co.
Ghent, 49 cks. Wilson, Sons, & Co., Ld.
Hamburg, 7 cs. "
Rotterdam, 1 "
17 cks.
9 bxs.
" 34 cks. Hull & Netherlands S. S. Co.
1 cs.
Dextrine—
Stettin, 50 bgs. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 40 cks. Hull & Netherlands S. S. Co.
3 bxs.
1 cs.
Extracts
Hamburg, 4 cks. Wilson, Sons, & Co., Ld.
New York, 200 brls. "
Valonia
Smyrna, 196 t.
Dyestuffs *(otherwise undes.)*—
Antwerp, 371 bgs.
Glucose—
New York, 750 bgs.
Stettin, 10 cks. Wilson,
100 bgs. Sons, & Co., Ld.
Glue—
Antwerp, 62 bls. Wilson, Sons, & Co., Ld.
Hamburg, 50 bgs. "
Kaolin—
Rotterdam, 200 bgs. Reckitt & Sons
Manure—
Ghent, 80 t. Wilson, Sons, & Co., Ld.
Nickel Salt—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.
Ochre—
Bremen, 2 cks.
Pitch—
Archangel, 400 cks.
Potash—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Saltpetre—
Hamburg, 2 cks.
Soda—
Ghent, 300 bgs. Wilson,
13 cks. Sons, & Co., Ld.
Starch—
Antwerp, 238 cs. Wilson, Sons, & Co., Ld.
" 50 O. S. Stephenson & Co.
Ghent, 95 cs. Wilson, Sons, & Co., Ld.
Sulphur—
Stettin, 1 bg Wilson, Sons, & Co., Ld.
Tallow—
Dunkirk, 113 cks. Wilson, Sons, & Co., Ld.
New York, 415 tcs. "
Tar—
Archangel, 2,035 brls.
Stockholm, 100 Wilson, Sons, & Co., Ld.
" 100
Tartaric Acid—
Rotterdam, 4 cks. Hull & Netherlands S. S Co.
Tin Ashes—
Stockholm, 2 brls. Wilson, Sons, & Co., Ld.
Turpentine—
Libau, 12 brls. Wilson, Sons, & Co., Ld.
Savannah, 2,446
Ultramarine—
Bremen, 17 cks.
White Lead—
Antwerp, 86 cks Bailey & Leetham, Ld.
Rotterdam, 30 Hull & Netherlands S. S. Co.
Wood Pulp—
Bremen, 227 pks. Wilson, Sons, & Co., Ld.
Christiania, 183 cs. "
282 bls.
Gothenburg, 402 "
Stockholm, 500 "
Zinc Ashes—
Antwerp, 9 cks. Bailey & Leetham, Ld.

GLASGOW.

Week ending September 15th.

Acetic Acid—
Rouen, 10 cks.
Asbestos—
Geneva, 40 pks.
Barium Sulphate—
Antwerp, 400 bgs.
Barytes—
Rotterdam, 2 pks. J. Rankine & Son
Bleaching Powder—
Rotterdam, 40 cks. J. Rankine & Son
Castor Oil—
Antwerp, 56 cks.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 kg. 2 cs. J Rankine & Son
Hamburg, 2 cs.
Colours—
Rotterdam, 1 ck. J. Rankine & Son
30 pks.
Cream of Tartar—
Bordeaux, 28 cks.
Dyestuffs—
Alizarine
Rotterdam, 40 cks. J. Rankine & Son
18 brls.
Aniline
Amsterdam, 1 ck. J. Rankine & Son
Rotterdam, 13 cks 5 cs. "
Aniline Colours
Hamburg, 4 cks.
Argols
Bordeaux, 20 bgs.
Extracts
New York, 12 brls.
Antwerp, 21 cks.
Ethyl Alcohol—
Hamburg, 1 cs.
Glucose—
New York, 326 brls.
Baltimore, 100
Glue—
Rouen, 4 cks. 22 bls.
Rotterdam, 40 bgs. J. Rankine & Son
Antwerp, 10 cks. 2 bls
Hamburg, 5 cks.
Glycerine—
Bordeaux, 64 cks.
Gypsum—
Rouen, 510 bgs.
Lead Acetate—
Rotterdam, 18 cks. J. Rankine & Son
Molasses—
Philadelphia, 500 brls.
Ochre—
Rouen, 33 cks.
Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son
Paraffin Wax—
Baltimore, 100 brls.
Phosphates—
Antwerp, 100 bgs.
Plumbago—
Hamburg, 1 cs.
Potassium Nitrate—
Hamburg, 50 cks.
Pumice Stone—
Leghorn, 3 cs.
Pyrites—
Huelva, 2,285 t. Tharsis Sulphur & Copper Co. Ld.
Rosin—
Baltimore, 800 brls.
Saltpetre—
Hamburg, 3 cks.
Soap—
Rouen, 40 cs.
Baltimore, 135 brls.
Sodium Sulphate—
Antwerp, 12 cks.
Starch—
New York, 125 sks.
Antwerp, 10 bgs. 422 cs.
Stearine—
Amsterdam, 64 bgs. J. Rankine & Son
Philadelphia, 75 tcs.
New York, 44
Tallow—
Rotterdam, 30 tcs. J. Rankine & Son
Ultramarine—
Rotterdam 6 cks. 2 cs. J. Rankine & Son
Antwerp, 10
Waste Salt—
Hamburg, 258 brls.
White Lead—
Rotterdam, 49 pks. J. Rankine & Son
Wood Pulp—
Montreal, 151 bls.
Oporto, 250
Christiania, 2,490 14 cs.
Zinc White—
Rotterdam, 50 pks.

TYNE.

Week ending September 10th.

Antimony—
Hamburg, 77 cs. Tyne S. S. Co.
Barytes—
Rotterdam, 101 cks. Tyne S. S. Co.
Colours—
Antwerp, 1 ck. Tyne S. S. Co.
Rotterdam, 1 "
Copperas—
Hamburg, 69 cks. Tyne S. S. Co.
Dyestuffs *(otherwise unaescribea)*
Antwerp, 1,217 bgs. Tyne S. S. Co.
Limestone—
Antwerp, 12 crts. Tyne S. S. Co.
Salt—
Hamburg, 450 t. Clephans & Wiencke
Soap—
Rotterdam, 4 cs. Tyne S. S. Co.
Soda—
Antwerp, 40 bgs. Tyne S. S. Co.
Starch—
Antwerp, 10 cs. Tyne S. S. Co.
Yarnish—
Antwerp, 5 brls. Tyne S. S. Co.
White Lead—
Antwerp, 13 cks. Tyne S. S. Co.
Wood Pulp—
Bergen, 16 pks.
Christiania, 567 bls.
Gothenburg, 160 pks.
Zinc Sulphate—
Gothenburg, 80 bgs.

GOOLE.

Week ending September 7th.

Alizarine—
Rotterdam, 34 cks.
Aniline—
Hamburg, 1 cs.
Rotterdam, 219 cks. 41
Antimony—
Boulogne, 5 cks.
Barytes—
Antwerp, 220 bgs.
Caoutchouc—
Boulogne, 4 cks.
Rotterdam, 1 cs.
Colours—
Hamburg, 24 cks. 1 cs.
Disinfectants—
Rotterdam, 50 cks.
Dyestuffs *(otherwise undescr*
Amsterdam, 1 cs.
Antwerp, 219 bgs.
Boulogne, 154 cks. 8
Rotterdam, 220 39
Farina—
Delfszyhl, 150 bgs.
Glue—
Boulogne, 6 cks.
Rotterdam, 60 bgs.
Logwood—
Belize, 520 t.
Naphthol—
Hamburg, 1 ck.
Ochre—
Dunkirk, 119 cks.
Phosphates—
Ghent, 800 bgs.
Potash—
Dunkirk, 2 cks. 4
Rotterdam, 11
Saltpetre—
Hamburg, 1 ck.
Rotterdam, 100 bgs.
Soda—
Antwerp, 2
Starch—
Ghent, 134 bxs.
Tallow—
Dunkirk, 145 cks.
Waste Salt—
Hamburg, 458 cks.
570 t.

GRIMSBY

Week ending Septembe

Albumen—
Hamburg, 10 cks.
Barytes—
Rotterdam, 100 bgs.
Caoutchouc—
Hamburg, 2 c
Rotterdam, 1
Chemicals *(otherwise un*
Antwerp, 8 cks.
Hamburg, 1 3
Malmo, 20
Colours—
Antwerp, 3 cks. 49
Hamburg, 38 10
Rotterdam, 4 27
Farina—
Hamburg, 100 bgs.
Starch—
Antwerp, 10
Varnish—
Antwerp,

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 14th.

Acids—
Durban, 40 cs. £89
Calcutta, 14 pks. 26
E. London, 10 kgs. 17
Sydney, 13 20

Ammonia—
Hamburg, 30 cs. £37
Cologne, 1 t. 25
Rotterdam, 10 cyldrs. 97
M. Video, 3 crates 14

Ammonium Carbonate—
Stockholm, 1 t. 2 c. £26
Bremen, 10 15
Marseilles, 1 28
Sydney, 15 cs. 22
St. Petersburg, 6 139
B. Ayres, 1 27

Ammonium Chloride—
Dusseldorf, 5 t. 6 c. £93
Cologne, 1 8 19 cks. 135
Constantinople, 5 145
Trebizonde, 8 64
Sydney, 13 10 253
Varna, 9 13

Ammonium Sulphate—
Dunkirk, 191 t. 5 c. £1,885
Barbadoes, 50 500
Ghent, 50 510
Jersey, 20 2-6

Bleaching Powder—
Durban, 34 pks. £19

Borax—
Sydney, 1 t. 3 c. £27
Hamburg, 2 5 100

Carbonic Acid Gas—
Channel Is., 43 tubes £16
Rotterdam, 2 10
Hong Kong, 4 cs. 18

Caustic Soda—
Durban, 1 t. 4 c. £23
Dunedin, 1 6 34
Delagoa Bay, 7 8
Hamburg, 2 5 21
Wanganui, 5 37
Canterbury, 13 38
Singapore, 2 dms. 5

Chemicals *(otherwise undescribed)*
Brussels, 5 kgs. £33
Calcutta, 2 brls. 28
Nelson, 8 14
Cape Town, 4 cs. 39
Dunedin, 110 pks. (pt.) 58
Barbadoes, 25 dms. 10
Bombay, 5 pks. 18
Sydney, 7 cs. 10 88
Brisbane, 70 95
Pt. Elizabeth, 3 15
Boulogne, 3 15
Montreal, 18 cks. 12 130
Stockholm, 10 dms. 18
Shanghai, 6 pks. 41
Durban, 25 19
Melbourne, 16 44 cs. 16 / 200 kgs. 721
Adelaide, 11 6 66
Wellington, 53 85
Victoria (B.C.), 12 pks. (pt) 12
Philadelphia, 5 cks. 13
Cologne, 43 88
Matia, 15 7 cs. (pt) 23
Gothenburg, 8 95
Lyttelton, 4 cs. 16

Citric Acid—
Nelson, 1 c. £8
Libau, 6 cks. 42
New York, 1 kg. 7
Gibraltar, 2 c. 14
Copenhagen, 10 65
Genoa, 3 t. 10 466
Christchurch, 2 13
Amsterdam, 7 pks. (pt.) 30
Madras, 2 cs. 15
Lyttelton, 1 7
Pt. Chalmers, 1 6
Gothenberg, 5 33
Dunedin, 1 6
Auckland, 1 7
Antwerp, 2 13
Rosario, 1 7
Rotterdam, 1 8
Wellington, 2 15

Coal Products—
Alizarine
New York, 50 cks. £545
St. Petersburg, 6 cs. 280
Lisbon, 4 58
Boston, 75 803
Aniline
Auckland, 13 cks. £262
Rotterdam, 12 dms. 400
1 cs. 21
Ghent, 1 10
Anthracene
Dusseldorf, 165 cks. £336
Cologne, 389 1,376
Benzol
Treport, 78 cks. £180
Boulogne 50 120
Carbolic Acid
Sydney, 200 dms. £33
St. Petersburg, 6 cs 34
Philadelphia, 5 4 68
Creosote
Sydney, 10 cks. £14
New York, 300 204
Sabine Pass, 4,749 3,303
Naphthaline
Paris, 10 cks. 95 bgs. £63
St Louis, 10 8
Philadelphia, 298 27
Hamburg, 6 53
Pitch
Copenhagen, 169 blocks £46
Antwerp, 740 t. £79
Wellington, 6 pks. 4
Hochfeld, 150 208
Pyridine
Cologne, 8 cks. £90
Tar
Trinidad, 10 runlets £6
Calicut, 20 13
Hamburg, 168 brls 72
Copenhagen, 140 cks. 75
Brisbane, 50 dms. 10
Wellington, 3 30 9
Tar Oil
Gothenburg, 207 cks. £155
Tiouol
Treport, 23 cks. £54

Coal Products *(otherwise undes.)*—
Brisbane, 100 dms. £23

Copper Sulphate—
Otago, 1 t. £16
Paris, 5 80

Cream of Tartar—
Melbourne, 2 t. £160
Pt. Elizabeth, 5 c. 19
Cape Town, 5 19
Wellington, 1 7 101
Pt Chalmers, 1 5 93
Dunedin, 10 38
Wanganui, 10 28
Sydney, 1 85

Disinfectants—
Madras 23 pks. £75
Colombo, 35 88
Calcutta, 14 12
Adelaide, 6 cs. 55 57
Otago, 17 54
Canterbury 8 29
Durban, 65 32
Alexandria, 80 dms. 22
Antwerp, 4 cks. 10
Sydney, 17 54
Barbadoes, 3 21
Brisbane, 10 26

Glycerine—
Rotterdam, 40 dms. £500

Manure—
Landerneau, 382 t. £2,454
Libau, 200 2 c. 490
Dunedin, 5 28
Santa Cruz, 17 140
Boulogne, 2 69
Bluff, 150 400
Jersey, 65 188
Demerara, 25 6 225
Cape Town, 431 1,186
Dunkirk, 411 11 1,955
Durban, 2 5 60

Oxygen—
Constantinople, 3 cs. £12
Pearl Ash—
Sydney, 4 cs. £32

Phosphates—
Beypore, 200 t. £440

Potash—
Hamburg, 5 t. 19 c. £305

Potash Salts—
Antwerp, 3 t. 13 c. £342

Potassium Bicarbonate—
Philadelphia, 2 t. 8 c. £63

Potassium Chlorate—
Sourabaya, 10 c. £15
Durban, 11 19
Otago, 5 8

Potassium Cyanide—
Townsville, 34 t. 1 c. £4,047
Fremantle, 10 10 1,235
Sydney, 20 cs. 220
Delagoa Bay, 9 889
Singapore, 10 103
Melbourne, 6 10 / 8 c. 762

Potassium Prussiate—
Danzig, 36 cks. £576

Prussian Blue—
Genoa, 2 cks. £8

Saltpetre—
Nelson, 15 c. £16
Timaru, 5 6
Lisbon, 3 t. 13 69
Dunedin, 1 3 24
Christchurch, 1 4 25
Wellington, 1 15 35
Gothenburg, 1 1 20
Hamburg, 6 9 138
Oporto, 2 5 42

Sheep Dip—
E. London, 12 t. 10 c. £200
Pt. Elizabeth, 1,500 dms. 650 pks. 218
Calcutta, 100 6
Timaru, 50 20
B. Ayres, 100 cs. 396

Soda—
Philadelphia, 67 t. £400
Rotterdam, 5 9 c. 30
Durban. 1 10 8

Soda Ash—
Oamaru, 6 cks. £25

Sodium Bicarbonate—
Nelson, 2 t. £15
Sydney, 1 24
Sunkim. 1 7

Sodium Bichromate—
Hamburg, 3 t. 5 c. £100
Rotterdam, 5 12 160

Sodium Carbonate—
Wellington, 10 c. £8

Sodium Prussiate—
Rotterdam, 8 t. 3 c. £380
Hamburg, 5 231
Boston, 5 180

Sodium Silicate—
Durbar, 2 t. 6 c. £10
Malta. 2 4 11
Auckland, 5 12 20

Sodium Sulphide—
Dunedin, 1 t. 6 c. £9

Sodium Tartrate—
Toronto, 1 c. £33

Sulphur—
Pt. Elizabeth, 50 kgs. £2
E. London, 110 cks. 190 163

Sulphuric Acid—
Madras, 1 cs. 4 c. £26

Tartaric Acid—
Lyttelton, 5 c. £29
Brisbane, 1 t. 112
Christchurch, 3 17
Pt. Chalmers, 2 12
Dunedin, 3 17
Wellington, 5 28
Lyttelton. 3 17
Cape Town, 2 11
Sydney, 1 120

LIVERPOOL.

Week ending September 14th.

Alkali—
Barcelona 12 t. 18 c. 2 q. £96
San Francisco, 24 18 2 102
Seattle, 9 15 3 43
Santos, 10 19 2 35

Alum—
Alexandria, 2 t. 10 c. £13
Beyrout, 2 5 13
Valparaiso, 2 2 q. 10
Melbourne, 3 3 1 16
Rangoon, 3 15 19
Montreal, 44 5 213
Samsoun, 7 5 3 33
Varna, 2 19 14
Tetuan, 1 10 7
Lisbon, 3 10 18
Astoria, 25 125

Anhydrous Ammonia—
Rangoon, 10 cs. £63

Ammonium Carbonate—
Genoa, 7 t. 1 c. £159
Rotterdam, 8 9
Bilbao 1 3 q. 28
Bordeaux, 7 11
Rangoon, 5 2 8
Barcelona, 1 1 28
Ancona, 4 6
Lisbon, 12 18

Ammonium Chloride—
Genoa, 1 t. 2 c. 1 ck. £43
Tampico, 3 2 q. 5
Naples, 1 1 3 32
Ibrail, 8 12
Barcelona, 2 9 44

Ammonium Sulphate—
Gd. Canary, 6 t. 8 c. £67
Valencia, 109 1,106
Genoa, 9 91
Palermo, 5 5 53
Alicante, 20 202
Bilbao, 20 15 207
Barcelona, 115 9 1,163
Bordeaux, 10 150
Nantes, 5 43
Las Palmas, 35 8 379
New York, 25 10 260
Santa Cruz, 2 20
Montreal, 15 3 2 q. 150
Malaga, 51 516
Huelva, 5 52

Basic Slag—
New York, 20 t. 8 c. 1 q. £43
Adelaide, 500 875
Nantes. 200 300

Bleaching Powder—
Ancona, 33 cks. 7 brls.
Baltimore, 208
Bombay, 26 cs.
Boston, 924
Genoa, 27
Havana, 15
Leghorn, 36
Nantes, 15
New York, 6 2 25 brls. 25 bxs.
Philadelphia, 136
Rio de Janeiro, 26 cs.
Rotterdam. 6
San Sebastian, 58
Tampico, 15 brls.
Vera Cruz, 80
Vigo, 6

Bone Ash—
New York, 3 t. 3 c. 3 q. £83

Boracic Acid—
Montreal, 2 t. 9 c. 3 q. £67

Borax—
Genoa, 10 c. £6
Stettin, 5 t. 6 176
Pt. Credit, 2 30
Hamburg, 1 3 q. 15
Rotterdam, 12 10 2 171
Copenhagen, 6 170
Sydney, 7 102
Palermo, 10 7
Antwerp, 2 28
New York, 2 3 1 27
Montreal, 1 10 21

Calcium Chloride—
Calcutta, 2 t. 1 c. £5
Bari, 10 2 23
New York, 12 3 24

Carbolic Acid—
New York, 5 t. 14 c. 1 q. £313
Hiogo, 2 10 163
Bombay, 1 2 10
Hamburg, 10 1 1 622

Caustic Potash—
E. London, 10 c. £12
Sydney, 1 t. 2 32
Christchurch, 1 28

Caustic Soda—
Alexandretta, 10 dms.

Alexandria, 173
Alicante, 110
Amsterdam, 105
Barcelona, 10 272 pks.
Bari, 33
Bilbao, 16 29 brls.
Bombay, 75 c.
Brantford 35
Calcutta, 87
Cape Town, 14
Cartagena, (Sp) 10
Chicago, 50
Christchurch 10 5 brls.
Corfu, 30
E. London, 25
Galatz, 110
Genoa, 342
Hamilton, 35
Hiogo, 100
Ibrail, 33
Kavalla, 10
La Guayra, 40
Malaga, 30
Marseilles, 75
Mauritius, 32
Melbourne, 31
Messina, 35
Monastier, 5
Naples, 35
New York, 539 100 25 bxs.
Oporto, 12
Passages, 40 pks.
Pernambuco, 124
Philadelphia, 75
Rangoon, 30
Rio de Janeiro, 8
Rotterdam, 53
Rouen, 18 cks.
San Francisco, 51 81 bxs.
San Sebastian, 60
Santos, 59
Santander, 18
Seville, 299 30 pks.
Symrna, 50
Stettin, 21 brls.
Sydney, 20
Tarragona, 81
Toronto, 50
Trieste, 40
Valparaiso, 35
Vera Cruz, 9
Vigo, 20
Wellington, 23 cks.
Zanzibar, 5

Chemicals *(otherwise undescribed)*
Stettin, 1 t. £15
Rotterdam, 50 2 c. 38
Bombay, 12 53
New York, 1 1 q. 13
Barcelona, 3 18 105
Melbourne, 9½ tcs. 7
Dunedin, 15½ 13

China Clay—
Baltimore, 344 cks.
Bombay, 261
Boston, 1,365
Lisbon, 10
Naples, 50
Newport News, 24
Pendo, 12

Citric Acid—
New York, 9 c. 2 q. £70
B. Ayres, 15 3 110

Coal Products—
Aniline Salts
Alexandria, 5 cks.
Valleyfield, 40 cs.
Vera Cruz, 10 brls.
Binitro Toluol
New York, 16 cks.
Creosote
Vera Cruz, 16 cks.
Dyes
St. John's, Nfd., 1 cs.
Tar
St. John s, 50 brls.

Copperas —
Syra, 1 t. 6 c. £3
Smyrna, 3 6

Copper Sulphate—
Iquique, 12 t. 10 c. £202
Samarang, 2 17 1 q. 46
Oran, 1 19 33
San Sebastian, 5 2 82
Danzig, 1 10 2 25
Rouen, 5 2 3 87
Sydney, 2 33
Melbourne, 15 246

Cream of Tartar—
Santiago, 5 c. £18
Montreal, 12 44

Disinfectants—
Bombay, 5 c. 1 q. £6

Dried Blood—
Dunkirk, 50 t. £350
Mauritius, 50 350

Dyestuffs—
Cutch
Hartford, 100 cs.
Extracts
Boston, 50 cks.
Milan, 6 cs.
New York, 55
Logwood
Vienna, 20 bgs.

Glycerine—
Pendo, 18 c. £12
Genoa, 1 t. 5 46

Kainit—
New York, 5 t. 3 c. £13

Magnesia—
B. Ayres, 20 cs.
Havana, 7 cks.
New York, 10
Paris, 36
Santiago, 2

Magnesium Sulphate—
Pendo, 8 cks.

Manure—
Lisbon, 10 t. £24
Gd. Canary, 10 c. 5
Rouen. 14 56
Teneriffe, 28 286

Paint—
Antwerp, 4 cks. 9 kgs. 2 dms.
Belize, 60
Bombay, 60
B. Ayres, 5 3 cs.
Cape Town, 35
Cartagena, 10
Genoa, 17 kgs.
Greytown, 14 cs.
Havana, 2
Hong Kong, 5
Madrid, 4 pks.
Nassau, 50
Port au Prince, 10 dms.
Pt. Natal, 121 pks.
Rosario, 400 kgs.
Rotterdam 5
St. John's, 14 730
San Sebastian, 14 dms.
Sulina, 3
Tocopilla, 134
Valparaiso, 3 cs.
Victoria, W.C.A. 30 kgs.

Painters' Colours—
Bilbao, 22 cks.
B. Ayres, 35
Maceio, 8 pks.
Madras, 20 brls.
Para, 50 dms.
Pendo, 6
Pirœus, 15 kgs. 1
Rio de Janeiro, 25
Salora, 1 cs. 5 20
Talcahuano, 71
Valparaiso, 20
Yokohama, 306 kgs.

Paraffin Wax—
Pendo, 3 cs.
St. Petersburg, 20

Phosphates—
Hamburg, 50 t. 11 c. £177

Potash—
Bilbao, 5 c. £17

Potassium Bichromate—
Constantinople, 2 t. 15 c. 3 q. £92
Vera Cruz, 1 8 59

Potassium Chlorate—
Calcutta, 1 t. £30
Copenhagen, 7 221
Hamburg, 5 150
Hiogo, 10 291
Konigsberg, 15 c. 24
New York, 27 2 703
Philadelphia, 8 225
Rotterdam, 5 19 180
Tampico, 15 24
Yokohama, 1 5 38

Potassium Cyanide—
Tal Tal, 2 t. £243

Salt—
Abonnema, 30 t.
Akassa, 866 8 c.
Antwerp, 25
Baltimore, 317
Barbadoes, 50
Belize, 6
Boston, 2,200 sks.
Buguma, 20
Burutu, 445 8
Calcutta, 4,015
Cameroons, 120
Cavalla, 25
Chicago, 50
Copenhagen, 372
Ghent, 260
Halifax, 100
Iquitos, 15
Kingston, 10 6
Loango, 10
Mauritius, 250
Montreal, 100 cs.
Mossel Bay, 25
Para, 960 bgs.
Sinoe, 440

Salt Cake—
Leghorn, 100 t. £196
New York, 5 8 c. 1 q. 81
Norrkoping, 200 265

Saltpetre—
Iquitos, 5 c. £5
Maranham, 15 1 q. 16
Pernambuco, 5 t. 10 120
Sydney, 1 21

Satinite—
Copenhagen, 10 t. 17 c. £33

Sheep Dip—
B. Ayres, 37 t. 15 c. 2 q. £1032

Soap—
Axim, 100 bxs.
Algoa Bay, 20 20 cs.
Bale, 255
Barbadoes, 1
Berne, 260
Bluefields, 250
Bombay, 260 20
Cabenda, 100
Calcutta, 37
Canaria, 225
C. C. Castle, 250
Cape Town, 30
Copenhagen, 16
Delagoa Bay, 35
Fogo, 10
Gibraltar, 150
Gothenburg, 200
Greytown, 550
Halifax, 300
Hamburg, 259
Hanover, 85
Hong Kong, 200 dms.
Iquitos, 750
Jersey, 20
Karachi, 510
Lagos, 51 pks.
Lausanne, 240
Leipzig, 12
Le Chaux de Fonds, 120
Loango, 100 bxs.
Lucea, 111
Lyttelton, 4
Madras, 45
Manaos, 180
Melilla, 25
New Chatel, 110
New York, 114
N'Gove, 12
Old Calabar, 700
Para, 100
Pendo, 3 3 cks.
Pt. Elizabeth, 1,000
Pt. Natal, 1,000 11
Pt. Said, 2 brls.
Queenstown, 7
Rangoon, 1 cs.
Rotterdam, 574
St. Gall, 250
St. John's, 35 20 pks.
St. John's, N'd., 130
St. Lucia, 100
St. Thomas, 1
Salt Pond, 224
San Antonio, 20
Santiago, 1
Sekondi, 10
Shanghai, 2
Sierra Leone, 360
Singapore, 110
Smyrna. 21
Teneriffe, 224
Toronto, 501
Wellington, 5
Zurich, 20

Soap Lye—
New York, 239 dms.
Rotterdam, 80

Soda Ash—
Acajutla, 30 cks.
Ancona, 14
Barcelona, 20
Boston, 600 bgs. 172
Calcutta, 100 kgs.
Copenhagen, 200 bgs.
Delagoa Bay, 100 kgs.
Genoa, 600 bgs.
Gothenburg, 20
Johannesburg, 40 kgs.
Lagos, 2
Lisbon, 150 bgs.
Maranham, 155 brls. 24
Montreal, 320
New York, 45
Norrkoping, 50
Philadelphia, 33 tcs.
Rio de Janeiro, 50 kgs. 70 } 500 brls.
Rio Grande, 50
St. Petersburg, 752
San Francisco, 104
Skein, 50 bgs.
Smyrna, 200 50
Toronto, 86
Vera Cruz, 25

Soda Crystals—
Ancona, 30 brls.
Boston, 56
Cape Town, 30 pks.
Constantinople, 50 cks.
Gibraltar, 45
Malta, 50
Montreal, 50 kgs.
Newcastle, 67
New York, 126 144
Quebec, 25
St. John's, N'fd., 10 20
Rotterdam, 102 bgs.
Toronto, 100

Sodium Arseniate—
Boston, 21 cks.

Sodium Bicarbonate—
Ancona, 60 kgs.
Antwerp, 30 2 cks.
Barcelona, 150 pks.
B. Ayres, 44 cks.
Calcutta, 100
Galatz, 100
Genoa, 85
Ghent, 4
Johannesburg, 34
Kingston, 200
Lisbon, 30
Marseilles, 26 pks.
Montreal, 316 dms.
Nantes, 116
New York, 15
Piræus, 23
Pt. Natal, 20 bgs.
Quebec, 25 kgs.
Rangoon, 28 8 cks.
Rotterdam. 35
St. John's, N'fd., 120 dms.
Salonica, 20
Seville, 107 9 cks.
Singapore, 8
Smyrna, 50
Sourabaya, 13
Tampico, 200
Toronto, 150
Trinidad, 140
Wellington, 40

Sodium Bichromate—
Montreal, 34 cks.

Sodium Carbonate—
Lima, 3 kgs.

Sodium Chlorate—
Antwerp, 5 kgs.
Gutujewski, 50
Oporto, 1 cs.
Rotterdam, 10

Sodium Oxalate—
St. Petersburg, 10 cs.

Sodium Prussiate—
Quebec, 14 cks.

Sodium Silicate—
Bilbao, 20 brls.
Greytown, 8
Kingston, 12
Mauritius, 3 cks.
Nantes, 44 dms.

Starch—
Ferrol, 14 bxs.
Pernambuco, 5 bgs.

Sulphur—
Boston, 125 t. 5 c. £
E. London, 2
Maranham, 5 1 q.

Sulphuric Acid—
Maranham, 1 t. 2 c. 2 q. £

Superphosphates—
Gd. Canary, 15 t. £
Malaga, 50
Stettin, 5,000 4

Tannic Acid—
Bombay, 1 c.

Tartaric Acid—
New York, 10 c. £

Varnish—
Kentville, 4 cs.
New York, 4 cks.
St. John's, 3 40 dms.
Seville, 8

White Lead—
St. John's, N'fd., 46 cks.

Zinc Chloride—
Bombay, 1 t. 19 c. £
Oporto, 2 6

NCHESTER.

ending September 14th.

5 cks.

21 brls.

ium Chloride—
5 brls.
1

Colours—
4 cks. 2 cs.

als *(otherwise undescribed)*
100 brls.
33 kgs.
2 cks. 2 cs.
4
20 brls.

oducts—
ne Salts
10 cks.
ol
2 cks.
thylamine
14 cks.
Oil
15 brls.
Salts
27 bgs.
as—
20 brls.
10

50 bgs.

22 cks.
5

6 kgs. 1 cs.
10 cks.

s' Colours—
4 brls.
10 cks.

3 cs.

Bicarbonate—
54 kgs.
4 cks.
1,400 kgs.
20

ystals—
120 kgs.

Naphthionate—
38 cks.

Sulphate—
21 cks.

30 brls.

tine—
1 brl.

13 brls.
3 cks.

HULL.

ending September 10th.

20 cks.
3
7

ium Sulphate—
307 bgs.
50
100
449

Soda—
200 bgs. 155 dms.
10

als *(otherwise undescribed)*
11 cks.
47
34 cs.
28 pks.
2
4
1
10
9
33
13
2
60
68
17
5
19

Cottonseed Oil—
Antwerp, 725 c.
Bordeaux, 100
Bremen, 206
Copenhagen, 304
Dunkirk, 20
Ghent, 102
Gothenburg, 106
Hamburg, 893
Harlingen, 34
Norrkoping, 60
Rotterdam, 223
Rouen, 300
Stettin, 41
Trieste, 100

Dyestuffs *(otherwise undes.)—*
Bombay, 5 cks.
Christiania, 12 bls.
Helsingfors, 1 cs.
Riga, 5
Rotterdam, 2
Uleaborg, 8

Glue—
Gothenburg, 20 bgs.

Linseed Oil—
Aalesund, 28 c.
Amsterdam, 100
Christiansand, 21
Christiania, 103
Copenhagen, 51
Drontheim, 78
Ghent, 7
Karachi, 10
Stavanger, 17

Manure—
Venice, 100 t.

Painters' Colours—
Antwerp, 256 dms.
36 cks. 1 cs. 118 pks.
Bombay, 196 18
Christiansand, 20
Christiania, 2 46
Copenhagen, 3 46
Danzig, 13
Drontheim, 88
Dunkirk, 2
Fiume, 9
Ghent, 31 306 dms.
Gothenburg, 10 3
Hamburg, 1
Hango, 2 pks.
Helsingfors, 3
Karachi, 1
Konigsberg, 25
Mariopol, 17
Palermo, 25
Rotterdam, 11 28 dms.
Rouen, 8
Stettin, 24
Stavanger, 1
Stockholm, 29 1 44
St. Petersburg, 1 pk.
Wasa, 50
Wyburg, 50

Phosphates—
Riga, 79 t.

Pitch—
Antwerp, 120 t.
Ghent, 2 cks.
Helsingfors, 90
Karachi, 136

Sheep Dip—
Bombay, 300 dms.

Slag—
Drontheim, 200 t.
Gothenburg, 9

Slag Meal—
Carlscrona, 400 t.
Malmo, 225

Soap—
Amsterdam, 127 cs.
Drontheim, 80
10 brls.

Superphosphates—
Copenhagen, 100 t.

Tallow—
Hamburg, 28 cks.
Riga, 36
Wasa, 34

Tar—
Amsterdam, 6 cks.
Christiania, 10
Danzig, 5
Dunkirk, 9
Helsingfors, 150
Hamburg, 5
Rotterdam, 6
Stettin, 5 brls.
Wasa, 25

Varnish—
Amsterdam, 1 cs.
Antwerp, 3 cks.
Stettin, 12
Stockholm, 2

GLASGOW.

Week ending September 15th.

Ammonium Sulphate—
Demerara, 201 t. 5¼ c.
Sables D'Olonne, 71 7¾

Bleaching Powder—
Victoria, Aust., 9 t. ¼ c.

Caoutchouc—
Rotterdam, £13

Caustic Soda—
Montreal, 15 t. 4 c.

Chemicals *(otherwise undescribed)*
Rotterdam, £15

Coal Products—
Alizarine
Brisbane, £25
Aniline
Brisbane, £50
Creosote Oil
Christiania, £45
Naphtha
Bordeaux, 8 t. 18 c.
Pitch
Canada, £72
Gothenburg, 353
Karachi, 43
Madras, 26
Tar
Bombay, £95
Boston, 80
Calcutta, 221
Christiania, 33
Danzig, 182 t. 11 c.
Madras, 45
St. John's, N'fld., 26

Disinfectants—
Demerara, £38

Extracts—
Canada, £92

Farina—
Calcutta, £55

Gelatine—
Philadelphia, £304

Linseed Oil—
Canada, 5 t. 2 c.
Trinidad, 7 4½

Manganese (Recovered)—
Rotterdam, £120

Litharge—
Trinidad, 2 t. 13 c.

Painters' Colours—
Adelaide, £123
Amsterdam, 2
Bombay, 60
Boston, 65
Brisbane, 155
B. Ayres, 112
Cape Town, 169
Colombo, 87
Demerara, 63
E. London, £45 1cs.
Huelva, £24
Lisbon, £37 16s.
Melbourne, £252

Paraffin Wax—
Danzig, 16 c.
Fiume, £525
Genoa, 110
Hamburg, 4
Leghorn, 450
Madras, 45

Phosphoric Acid—
Demerara, £34

Potassium Bichromate—
Gothenburg, £61

Soap—
Bombay, 1 t. 5¼ c.
Trinidad, 1 18¼

Stannous Chloride—
Demerara, £102

Sulphuric Acid—
Bombay, £1,100
Karachi, 220
Madras, £57 15s.

Superphosphates—
Nakskov, 902 t. 3½ c.

Whiting—
Brisbane, £31

TYNE.

Week ending September 10th.

Alkali—
Amsterdam, 21 t. 18 c.

Ammonium Sulphate—
Valencia, 28 t. 10 c.

Antimony—
Amsterdam, 1 t.
Barcelona, 1 1 c.
Montreal, 5
Rotterdam, 2

Barium Binoxide—
Barcelona, 1 t. 3 c.

Bleaching Powder—
Amsterdam, 20 t. 12 c.
Antwerp, 81 4
Drontheim, 10
Ghent, 5 12
Hamburg, 4 11
Odense, 1 3
Rotterdam, 23 4

Caustic Soda—
Copenhagen, 5 t. 11 c.
Montreal, 14 10
Odense, 1 9
Stavanger, 1 14

Litharge—
Copenhagen, 14 c.
Stockholm, 5 t. 9

Magnesia—
Antwerp, 1 c.
Barcelona, 10 t. 7
Copenhagen, 11
Hamburg, 1 4

Manure—
Valencia, 60 t.

Paint—
Antwerp, 2 c.
Bergen, 4
Hamburg, 1 t. 15

Painters' Colours—
Antwerp, 1 c.

Soda—
Aalborg, 5 t. 7 c.
Amsterdam, 20 1
Rotterdam, 10

Soda Ash—
Bergen, 10 t.
Hamburg, 4 17 c.

Soda Crystals—
Stockholm, 19 t. 19 c.

Sodium Sulphate—
Antwerp, 50 t. 2 c.

Superphosphates—
Stettin, 733 t. 1 c.

White Lead—
Copenhagen, 1 t. 11 c.
Montreal, 50 16
Stockholm, 1

GOOLE.

Week ending September 7th.

Chemicals *(otherwise undescribed)*
Amsterdam, 5 cks.
Dunkirk, 1 cs.

Coal Products *(otherwise undes.)—*
Amsterdam, 65 cks.
Antwerp, 5
Boulogne, 40
Ghent, 2

Dyestuffs *(otherwise undescribed)*
Hamburg, 4 cks.

Manure—
Dunkirk, 536 bgs.
Hamburg, 250

Painters' Colours—
Amsterdam, 100 bgs. 1 dm.
3 cks.
Boulogne, 1 1 cs.
Ghent, 4 6
Hamburg, 6 1

GRIMSBY.

Week ending September 10th.

Alkali—
Dieppe, 5 kgs.

Ammonium Sulphate—
Hamburg, 500 bgs.

Caoutchouc—
Malmo, 2 bs.

Chemicals *(otherwise undescribed)*
Dieppe, 4 cks. 4 cs.

Coal Products *(otherwise undes.)—*
Dieppe, 64 cks.
1 kg.
Hamburg, 2 cs. 4 btls.

Dyestuffs *(otherwise undescribed)*
Dieppe, 2 kgs. 2 cs.

Manure—
Esbjerg, 7,789 bgs.

Painter's Colours—
Antwerp, 5 cks. 3 pks.
Hamburg, 1
Rotterdam, 5 2 brls.

PRICES CURRENT.

WEDNESDAY, Sept. 21st, 1898

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	17	5	0
Alum (loose lump) .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B. .. .. ,,	0	0	2½
,, =24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	0	0
,, ,, (grey) Hull .. .. ,,	9	17	6
Aniline Oil (pure) .. .. per lb.	0	0	5¼
Aniline Salt ,, ... ,,	0	0	4⅝
Antimony .. .. per ton	38	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	0	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	15	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9¼
,, 50/90 ,, ... ,,	0	0	9½
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97 % .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4½
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	6
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	52	0	0
,, Sulphate .. .. ,,	17	5	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80 % .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	40	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	2	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	16	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	0	0
,, *Nitrate*	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	2	6
,, ,, (grey) (ex ship .. .. ,,	7	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P .. .. .. ,,	0	3	1
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	0	0
Stearine .. .. per ton	25	0	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. ..nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	22	15	0
,, ,, (Caustic Potash) 75/80 % .. ,,	18	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (renned) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	4½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	12	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton (1/2 ton lots)	7	17	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (1/2 ton lots)	7	12	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (1/2 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (1/2 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (1/2 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Prussiate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	3½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	5	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5½
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	22	0	0
Tin Crystals .. .. per lb.	0	0	5½
,, English Ingots .. .. per ton	76	15	0
Zinc (Spelter) .. .. ,,	22	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

HEMICAL TRADE JOURNAL

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Directors of this Company invite Tenders for chase of 720 tons of the surplus TAR to be produced at their Works in ng the Twelve Months commencing the first day of November next. may be obtained from the undersigned, to whom endorsed Tenders red not later than Tuesday, the 4th of October.

JAS. ERADDOCK,
Manager and Secretary.

Radcliffe,
, 1898.

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CURRENT TOPICS.

FINANCIAL MEMS.

IT is now about two years since the much-talked-of Italian Sulphur Trust crystallised into the Anglo-Sicilian Sulphur Co., Ltd.

In the earlier stages of the Trust negotiations the outlook was not any too encouraging. There are always great risks to be run and difficulties to be encountered when an attempt is made to control an important article like sulphur.

Apart from the troubles of internal arrangement among the associated producers, there are the possibilities of new discoveries and the underselling of "outsiders" to be reckoned with. Moreover, the past history of sulphur was not fraught with many propitious auguries, while to the superstitious—and investors have a tendency that way—its popular associations were too suggestive of unpleasant results.

However, by February of last year there were signs that despite omens at home and signs and wonders in the States, the combination was influencing the exports favourably, and in the following October it was made clear that the increased trade had proved remunerative. Now for the second time the Company are able to show further progress, while the report which appears elsewhere in this issue reveals a healthy state of affairs generally, both for producers and shareholders.

Another feature of the financial market this week has been the momentary excitement caused by the announcement of a winding-up petition against "The Rio Tinto Copper Company, Ltd." At first glance it was thought by some to refer to the Rio Tinto Co., Ltd., and the belief caused considerable consternation. On second thoughts, however, the practical impossibility of such a *contretemps* befalling this well-known concern became dominant, and conjecture was rife as to which could be the company the advertisement was intended to refer to. Inquiries led to the discovery of the fact that the advertisement had reference to the "New Rio Tinto Copper Co., Ltd. We recollect having read and heard of the company many, many months ago, since when we have heard nothing until the present. It seems strange that colourable imitation should be so rampant in the titles of companies and yet receive so little attention. For the protection of investors alone the practice should be checked. Cannot Somerset House shine for once?

FOR PEACE.

It is pleasing indeed to be able to record the decision arrived at by the Federated Coal Miners at their Conference on Wednesday this week. Though Lancashire and Cheshire were for war, the majority—and that a large one—favoured peace. The actual voting resulted thus:—For accepting the agreement dated July 6th (2½ % advance): Yorkshire, the Midland Federation (which includes Staffordshire, Warwickshire, and Worcestershire), Derbyshire, Nottinghamshire, Bristol district, Somersetshire, and Cleveland, with a total of 194,000 votes.

Against accepting the proposals (and fight for 10 per cent. advance): Lancashire and Cheshire and Leicestershire, with a total of 29,200 votes.

The Lancashire and Cheshire delegates then brought before the Conference the resolution drawn up at their meeting held last Saturday, by the terms of which they sought to provide that the duration of the Conciliation Board, which is to be established, should be determinable by three months' notice from either side. They urged for the acceptance of this resolution in order that one of the principal complaints of the Lancashire miners might be removed. It was, however, suggested that if the resolution were pressed the whole agreement might be jeopardised, and as the Lancashire representatives were in a decided minority they withdrew their proposal, it being agreed without dissent to accept the terms of the employers of July 6th for the regulation of wages in the federated districts.

This decision is indicative of good sense, and, we take it, an honest desire for legitimate arbitration, so that we trust the coal-owners will bear well in mind its significance and self-effacement when considering the requests of the miners during the two years in which the Conciliation Board will be operative under the terms of July 6th.

FALSE MARKING IN THE STEEL TRADE.

AN IMPORTANT CASE.

At the Rotherham Police Court, last week, Messrs. Steel, Peech, and Tozer, steel manufacturers, of the Phœnix Bessemer works, the Ickles, near Sheffield, were summoned at the instance of the Foreign Office for several offences under the Merchandise Marks Act. The first information charged them with having in their possession for the purpose of trade certain goods, to wit two samples of casts for wagon wheel tires to which a false trade description was then applied, contrary to section 2, subsection 2, of the Merchandise Marks Act, 1887. There were similar informations relating to March 22nd and 24th, and the defendant company were further summoned for having in their possession a false trade mark. Mr. Horace Avory prosecuted and Mr. C. F. Gill represented the company.

Before the case for the prosecution was opened Mr. Gill said that after carefully considering the summonses he had come to the conclusion that the defendants came within three of the informations, and as the matter had been left entirely in his hands he had advised the company to plead guilty with regard to these three summonses, and this they would do.

Mr. Avory, after referring to the section under which these proceedings were taken, said that during last year the Crown Agents for the Colonies entered into contracts with Messrs. McClelland and Co, of Glasgow, Messrs. Kitson and Co., of Leeds, and Messrs. Sharpe, Stewart, and Co., of Glasgow, for the manufacture of railway locomotives and wagons to be sent out for use on the Uganda Railway, and the Bombay, Baroda, and Central Indian Railway. These three firms in their turn entered into sub-contracts with the defendant company for the manufacture of the tires and wheels of the locomotives and wagons, and, in that sub contract was embodied the specification under which the Crown Agents had required that these locomotives and wagons should be constructed. That specification required that the tires of the wheels should stand three separate tests—first, the drop test; secondly, the tensile test; and, thirdly, the analytical test. On March 18th last, Mr. Richards, a Government inspector at Sheffield, visited the works of the defendant company for the purpose of testing some of the tires. He submitted them to the drop test, which they satisfactorily passed, and he then stamped them with his private stamp—the letters "I.S.R." and a crown. He then proceeded to mark on the tires pieces which were to be cut out for the purpose of being sent to London for further testing. On March 24th, he again attended at the works to see that these pieces had been packed and sent to London to Sir Alexander Rendel, who is chief engineer for both the railways. He found on the pieces which were produced to him and which purported to have been cut out of the tires he had marked a mark which was, however, not the mark he had used.

A FORGED STAMP

had been placed on these pieces in imitation of the one he had used. He had reason to suspect that something of the kind had been going on, and in order to find out whether this was so or not he had placed a *small private* mark on his stamp, and on examination of course he found that this private mark was missing from the forged stamp. Mr. Richards at once saw a member of the firm and demanded that he should ascertain who was responsible for this substitution, but this he stated he could not do. An examination was afterwards made of the various samples, and it was found that those bearing the forged mark were of much better quality than the actual tires that were manufactured for the railway, the latter containing more phosphorus and sulphur than was allowed by the specification. Communications were entered into with the company, whose explanation was that the fault lay at the door of a sub-contractor who was foreman of the tire department, but on a demand being made for the name of this foreman the firm declined to give it. In conclusion, Mr. Avory called the attention of the magistrates to the seriousness of the offence, and asked that the full penalty of £20 should be imposed in each case.

Mr. Gill said that, having regard to the fact that decisions given under this section had made it of a very far-reaching character, he had been compelled to advise his clients to plead guilty even though the illegal acts had been committed by a servant without their knowledge. There was no doubt that the law held them responsible. It was therefore of no use for him to call evidence that the tires supplied by the defendant company for these railways were as good as any that could be made. The defendants had been in business something like 25 years, and had supplied tires and axles to every railway company of any importance in the kingdom, and during the whole of that long period they had never had a single complaint in respect of the quality of their work. They employed something like 1,400 men, and dealt with upwards of 2,000 tons of steel per week, and they were therefore necessarily obliged to trust largely their foremen; it would be impossible for them to exercise personal supervision over all work. They expressed deep regret that these irregularities had occurred. Since this matter was brought before their notice they had invited Sir Alexander Rendel to attend the works and go personally into the matter, but this offer was declined; and another offer to replace any material with which fault was found and to see that the rest of the work was carried out under personal supervision was also declined, and the contract had been cancelled.

The magistrates retired, and on their return into Court, the Mayor (Alderman Neill) said the Court regretted that they had had to deal with such a case. The charge was a very serious one, but the Bench could not help bearing in mind that the money penalty was trifling beside the other consequences that followed on such a case. The defendant company would be fined £10. on each of the three summonses, they would have to pay 50 guineas costs, and an order would be made for the stamp to be forfeited.

Mr. Gill explained that the stamp was destroyed some time ago.

Reports of Companies.

THE ANGLO-SICILIAN SULPHUR COMPANY, LTD.

The report of this Company for the second financial year ended 31st July, 1898, states that the gross profits have amounted to £149,820., and there is a net profit of £90,807. Out of this sum an interim dividend of 3 per cent. on the amount paid up on the preference shares for the six months to 31st January, 1898, was paid in March last, and it is now proposed to pay a further dividend for the second half of the year of 3 per cent., making a total distribution on the preference shares of £34,283, being 6 per cent. for the year. Of the balance 20 per cent., or £11,316, has been credited to the capital guarantee fund, which will then amount to £13,945.; £22,582. has been credited to the general reserve fund, which then stands at £29,633; and the remainder, £22,685. is divisible as follows:—One-tenth (£2,268) to the preference shareholders, which, with £321 5s. 10d. standing to their credit from last year, will admit of a further distribution on this class of shares, in addition to the 6 per cent. as above, of 1d. per share on the fully paid shares and ¾d. per shares on the shares on which 15s. has been paid, carrying forward £205, and the Council recommend that these amounts be dealt with accordingly; nine-tenths to the ordinary shares, or £20,416., with which the Council recommend a payment of a dividend of 7d. per share, free of income tax, on each ordinary shilling share.

DIVIDENDS.

Castner-Kellner Alkali Co., Ltd.—The directors have declared an interim dividend at the rate of 8 per cent. per annum for the six months ending September 30.

F. Reddaway & Co., Ltd.—The directors of F. Reddaway and Co, Ltd, have declared an interim dividend for the half-year ended June 30, 1898, at the rate of 6 per cent. per annum on the preference shares and 8 per cent. per annum on the ordinary shares of the company, less income tax, payable on and after October 1st.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Separating Solid Paraffin from Liquid Hydrocarbons. J. Wishart. 19,439. September 13.

Manufacture of Peroxides. H. Blumenberg, junr. 19,446. September 13.

Cement Kiln. V. Kjeldsen. 19,465. September 13.

Manufacturing Barium Dioxide. W. P. Lake. 19,470. September 13.

Manufacture of Red Lead and other Lead Oxides. T. H. Leathart. 19,512. September 14.

Bricks, etc., from Alkali Waste. R. Brunk. 19,528. September 14.

Electrolysis of Alkaline Salts. J. Greenwood. 19,581. September 14.

Prussian Blue, Prussiate of Potash, and Alkaline Cyanides from Gas Purifying Material. E. Donath and E. Ornstein. 19,641. September 15.

Distilling Shales, Peat, etc. G. H. Hosie. 19,658. September 16.

Apparatus for Separating Bodies having different Degrees of Solubility. E. C. C. Stanford. 19,742. September 17.

Manufacture of Chlorine, Bleaching Liquids, and Powders. E. Piffard. 19,743. September 17.

Manufacture of Ammoniacal Copper Solution (Schweizer's Reagent). A. Marshall. 19,752. September 17.

Manufacture of Cyanides, Ferro- and Sulpho-cyanides, and the Recovery of Bye-products. J. Raschen and the United Alkali Co., Ltd. 19,767. September 17.

Treating Animal and Vegetable Fats, etc. W. J. Engledue. 19,771. September 17.

Treating Calcium Carbide. J. Bilbie and H. Drivet. 19,786. September 17.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Method for the Manufacture of Sulphur Trioxide (Sulphuric Anhydride). O. Imray, Birbeck Bank Chambers, Chancery-lane, W.C. (communicated by Farbwerke vormals Meister, Lucius and Brüning, Hoechst a/Main, Germany). Eng. Pat. 6,057. March 11, 1898.

The trioxide is produced on a technical scale by passing a heated mixture of SO_2 and O, over a contact body in a counter-current apparatus of simple construction. The latter is demonstrated by two figures. The heat liberated during the formation of the SO_3 is communicated to the mixture of SO_2 and O on its way to the contact-body, so that when once started the process works continuously without the aid of external heat.

Generating Ozone and Apparatus therefor. H. H. Leigh (of Phillips and Leigh), 22, Southampton Buildings, Chancery-lane, W.C. (communicated by Henri Abraham and L. Marmier, both of 6, Boulevard de Strasburg, Paris). Eng Pat. 20,572. September 7, 1897.

The generator is composed of circular or rectangular electrodes, provided with a central opening, through which a perforated pipe passes for the removal of the gases treated. The main generator is connected through a cooling device, with an auxiliary generator operated with the excess current from the main generator. There are eight figures, which must be consulted for particulars of the construction.

A New or Improved Pipette for taking up any desired quantity of Liquid. P. Weissgerber, Lanterbach, Upper Hesse, Germany. Eng. Pat. 14,549. July 1, 1898.

The pipette is provided inside with a movable plug (fitted with a float valve) and an india rubber ball at the top. The plug can be adjusted to any height in the pipette. The ball is squeezed and the point of the pipette placed beneath the surface of the liquid to be drawn up. On releasing the ball, the liquid rises until it closes the float valve in the plug. When desired the contents are discharged by a second compression of the india rubber ball. There are four figures showing various forms of valves. The pipette is chiefly suitable for oils and similar neutral fluids.

Improvements in connection with Filter Beds for Filtering Sewage, Water, or other Liquids. R. O. Wynne-Roberts, Oswestry, Salop. Eng. Pat. 24,276. October 20, 1897.

This invention is absolutely of a mechanical nature. It relates to an ingenious arrangement for liberating filtered water, &c, from the filters, and also supplying unfiltered water to the beds in rotation. The power is derived from a water wheel driven by the filtered water. There are seven figures illustrative of the mechanism and its details.

Improvements in the Method of and Apparatus for Purifying and Softening, or similarly Treating, Sewage and other Impure Water W. Watson, 27, Albany Buildings, Market-street, Bradford, Yorks. Eng. Pat 21,982. September 25, 1897.

The treatment is conducted in a cylindrical tank provided with a scum sluice and skimming arms, a neutralizing and a softening tank being likewise connected with the main treatment tank. The liquid to be treated is forced into the main tank considerably below the level of the liquid already therein. A filtering device is provided. There are six figures.

Improvements in the Manufacture of Electrodes for Electrolytic Processes. A. Zimmermann, 9 and 10, St. Mary-at-Hill, London (communicated by the Chem. Fab. vorm. E. Schering, 170 and 171, Mullerstrasse, Berlin). Eng. Pat. 23,352. October 11, 1897.

A backing of glass, porcelain, &c., is covered with a coating of an alloy of the noble metals, *i.e.*, gold, silver, platinum, or the metals of that group. Tha success of the method hinges on the use of an alloy. Several examples are given, one of which is as follows:—95 parts of fine platinum powder and 5 parts of basic nitrate of bismuth are rubbed with thick resinous turpentine oil into a thin pulp, which is applied with a brush to a porcelain backing, and burnt on, in a muffle. Fluxes, such as boric or phosphoric acids, are also added to the mixture if desirable. The coating may be strengthened by electrolytic deposition.

Improvements in the Production of Chemical Compounds from a certain Oil or Oils, or the Fatty Acids of the same, and the Employment of such Compounds in the Manufacture of Drying Oils, Varnishes, Enamels, Lacquers, Antifouling Compositions, and the like. S. G. Rosenblum and the Commercial Ozone Syndicate, Ltd., of Imperial Chambers, Cursitor-street, and 31, Lombard-street, London, respectively. Eng. Pat. 12,508. June 3, 1898.

This patent is merely a technical amplification of patent 16,147/97 (vide *C.T.J.*, 586, p. 99) so as to specify and definitely cover the claims set forth generally in the latter patent. A product capable of yielding excellent "drying oils" is prepared from Chinese wood oil (or Tung oil), and is also applied to the various uses set forth in the above title.

Improvements in the Manufacture of Carbide of Magnesium. J. E. T. Woods, Chantry-road, and W. A. Byrom, 32, Great St. Helens, London. Eng. Pat. 14,780. July 5, 1898.

The carbide is produced in two stages, the first of which is the preparation of the gaseous mixture required, and secondly the actual formation of the carbide. To obtain the gaseous mixture crude petroleum vapour is passed through retorts charged with bog ore and heated to about 1,000° F. The iron ore is reduced to a spongy mass, some free carbon is deposited, and a mixture of acetylene and marsh gas is formed. The latter is conveyed to a gas holder. A current of steam is then passed through the retorts, generating free hydrogen, which combines with the deposited carbon to form more acetylene and marsh gas, admixed with a large proportion of hydrogen. The products of this reaction are mixed with the other gases in the holder. To form the carbide, this gaseous mixture, together with a certain amount of air, is fed into a furnace charged with fine charcoal and magnesium limestone. The construction of the furnace is described in patent 14,453/98.

PROJECTED WOOD PULP FACTORIES.—There are two million acres of pine forest on the island of Anticosti and it is likely Menier will establish two pulp factories.

CYANIDING IN QUEENSLAND.—The cyanide process of recovering gold is working wonders for other districts besides the Rand, and it is very hard upon the Glasgow discoverers of the method that their rights are being ruthlessly ignored practically all the world over. Papers from Charters Towers, Queensland, states that in the first seven months of this year 122,986 tons of quartz were crushed and 132,980 oz. of gold extracted. Of tailings, previously regarded as waste heaps, 238,986 tons were treated by the cyanide process, and no fewer than 100,946 oz. of gold recovered.

A WORKING MODEL OF THE SEPTIC PROCESS.—At the Birmingham Health Exhibition, opened on Monday, a stand is occupied by the Septic Tank Syndicate, of Exeter, who are showing in working order a model which illustrates very clearly the company's method of purifying sewage by natural means. The installations are simple in construction and entirely automatic in action, consisting of septic tanks, in which all organic solids are liquefied and the formation of sludge avoided, and alternating filters. The system has been adopted by the Exeter Corporation. Another model which works on the same principle is for use in a private residence, and the experiments made with this are said to be highly satisfactory.

Official Memoranda.

From the Board of Trade Journal.

THE MINERAL RESOURCES OF PERSIA.

The mineral resources of Persia are but little developed, notwithstanding the ancient civilisation of the country; gold mines are known in a number of places, but either their remoteness or the low grade of their ore militates against their exploitation at present. In the fourteenth century *go'd* washing was carried on at the northern edge of the great salt desert, south of Damghan, along the Kuh-i-zar (mountain of gold). The gravel washed there assayed 2 to 3 gms. per metric ton.

The Bulmus-Bash Mountains, situated to the north of Kavend (28 km. west of Zend) show gravels containing 0 3 to 0·4 grm. gold per ton. About 1 km from Kavend there is a limonite mine in limestone, together with quartz veins containing hematite and assaying 0·311 grm. gold per ton. Some springs at this point are depositing iron oxide, which, upon assay, showed a maximum of 0 525 grms. gold per ton. In the Turkobeh mountains at west of Meshed, old gold mines opened on quartz veins in mica slate are reported. Gold-bearing quartz veins are also noticed 2 or 3 km. west-south-west from Meshed, as well as west of Meshed, near Turkobeh In the same vicinity, at Fahr Daud, near Bozmishk, there are old copper mines, filled with water; the alluvial sand near them assays, if the samples are to be believed, 11 grms gold per ton.

Silver mines are noted between Tasan and Zahadan, in Southern Persia, in the vicinity of Dastan, in the Kuh-i-nugre, but the kind of ore is unknown. The mines in the Sahend Range, in the vicinity of Tabris, bear stephanite, pyragite, and tetrahedite. In the Zendjan district a silver mine is develo ed 1 km north-west of Murassu (38 km. west-south-west of Zendjan), in the Turbet Mountains. The vein, which is in granite, contains quartz and pyrite, the ore assaying 46 grms. silver per ton. On the Arghun Mountain, near the headwaters of the Anghuran river, about 15 km. east-north-east of Tahkt-i-Soleiman, there is a silver-lead mine, and another further north-west, named the Uriard mine. The veins, which traverse mica-slate breccia, are 1·5 to 1 20 cm. thick, and carry much cerussite with white calcite and red fluorite. They are developed by seven shafts about 100 m deep, sunk through old workings, which are dangerous to the miners, caves-in being frequent. Out of the 110 persons employed in them 2·5 per cent. are killed annually. The mine pays an annual tribute of about 400 francs to the Government, and produces about fifteen tons of agentiferous lead, yielding by cupellation 346 grms. silver per ton. In melting the ore, 5 parts assaying 50 per cent. lead are reduced with one part of charcoal. North of these mines, in the same valley, there are veins of fluorspar in mica slate, but the use of fluorspar as a flux is not known. A very ancient silver-lead mine is reported at Afshar, on a tributary of the Saruk river. 18 km. from Tahkt-i-Soleiman, where veins of reddish gangue with quartz and argentiferous galena traverse limestone trobedded with slate; the mine is developed by seven shafts sunk to the depth of 40 m, and the argentiferous lead obtained is said to yield 676 grms. ag per ton Silver mines are also reported near Djiruft, about 50 km. south-east of Kerman, and in the Basru mountains, between Ghavashir and Tars, and near Rey.

Quicksilver ore is supposed to occur in the basalts, near Sandjiek, Kiz Kapan, Karakeia, three villages in the Afshar mining district previously alluded to, which is noteworthy since cinnabar has also been detected in the auriferous gravel at Zarashuran.

Copper ores are very common in Persia, and copper was exported in former times, but since most of the mines are now abandoned, it is difficult to determine which of them might be workable. The Sahend range, near Tabris, bears deposits of caprite, bornite, and other ores.

Tin ores are supposed to occur in the Asterabad district in North-eastern Persia, and in the Tabris district in North-western Persia. Ancient writers mention tin in the vicinity of Dragan in Ariania.

Antimonite exists in Persia, though its localities are unknown to European mineralogists. It is sold at Teheran under the name surmeh for blackening the eyebrows, for which purpose it is used by all the Mohammedan peoples. Many mountains, designated Kuh-i-Surmeh, indicate deposits of this ore. Not far from the Afshar lead mine there are stringers of antimonite, 4 to 5 cm. thick, in limestone, but it is not known if the deposit is workable.

Realgar is mined in the Tahkt-i-Soleiman mountains, in the Aserbeishan district, 14·5 km. from the northern fork of the Saruk River. The country rock is slate, penetrated by melaphyres and basalts. The realgar occurs in veins 0·33 to 0 50 m. wide at the contact of melaphyre and slate. The mines are worked under lease from the Government for a royalty of 7 5 tons of first grade realgear per annum. This grade of mineral sells at H madan at 330 francs per ton. The second grade brings 170 francs, and the third 100 francs. The mines employ eight men, who work seven months of the year, the region being inaccessible in the winter.

Five hours north of this mine, near the village of Goramis, the another occurrence of realgar, accompanied by orpiment, in thin v Occurrences are also noted in the vicinity of Kazvin, and near Afshar lead mine.

Sulphur is found in Persia at numerous points. It is obtained fro the crater of the old volcano Demavend, east of Teheran. South- eas from Tash, in the Alberus Range, there are marls impregnated with sulphate of aluminium and sulphur. There is a sulphur produ cing region in North-western Persia, between Mesjed-i-Suleiman and the Asmari hills. The product is sold at Dizful.

Sulphur occurs in a soft earthy rock on an ancient mud volcano near Zendan, in the Aserbeidshan district. This deposit is worked, the product being sold in the city of Zendjan A few kilometres west of the realgar mine, in the Tahkt-i-Soleiman mountains, there is a sulphur mine which employs about 60 men in summer. Sulphur also exists 8 km. from Coramis, in the Kourdish mountains.

The distribution of *iron ores* is very extensive. Argillaceous limonite accompanies the Liassic coal seams and clays. The Liassic sandstones are rich in embedded spherosiderite as in the forest region of the Heras River, where ore was dug and smelted before the cheaper Russian iron came into the market. Similar deposits are found also in the Chilan Range.

Thick veins of limonite and hematite in quartz are found near Kasvin and Takht-i-Soleiman, in Aberseidshan. At Kara there are ores running about 60 per cent. iron. On the river Angerd there are deposits of limonite and hematite ores. In the district of Teridan, on the north-east slope of the Zerdi-Ruh mountains, hematite and martite ores running up to 55 59 per cent. iron are found in beds between micaceous limestone and limestone. Some mining was done there, and a blast furnace was started by some Scotch operators. The enterprise did not succeed, and was abandoned. Extensive deposits of hematite ores are known in the Kahrud mountains Iron ores are also found in the dioritic rocks of some of the islands in the Persian Gulf.

Manganese ores are worked in a small way near Kirman. The only use made of this ore in Persia is to colour glass.

Cobalt ore occurs near Yamsar, in the district of Kashan. They have been worked in a small way for many years, the cobalt oxide being used for colouring pottery. Cobalt and nickel have been found in the Shemriam mountains, near Imam-radeh-David, and in the Sahend mountains, near Tabiz

Kaolin is found at Kerman-shah. Mineral paint is dug near Ispahan. Fuller's earth is found at Kum, and pottery clay in several places. A peculiar whitish clay, found near Kum also, is eaten by the people. This is a singular custom, and is not unknown in some parts of Europe and the United States.

Coal is found in the Alberus range, running southward from the Caspian Sea. It is also found in the country drained by the Shahrud River and along the Kevetch River. There are many outcrops in the districts mentioned, and coal taken from them has proved of very good quality. Brown coal, or lignite, is found near Tabriz, outcropping in a seam 1·50 metres wide.

Petroleum is found in the Tertiary deposits on the south-west border of the Persian highlands. It is apparently abundant in the section bordering on the Persian Gulf Along the Gulf shore there are oil springs which were known at a very early date, and were described by Strabo in the second century. Oil springs are also found in the Bakhari Range in Southern Persia, near the Dalakhi River, on the road from Abushir to Shiraz. In the Darab Mountains there are springs where the crude oil has oozed out and gradually solidified into a sort of asphalt, or asphaltic bitumen. A deposit of asphalt is found at Sendjari.

Salt occurs very abundantly in Persia, both as rock salt and in saline lakes. The rock salts are found embedded in the Tertiary Micone series. Rock salt is mined extensively at Sherifabad, on the slope of the Nishapur Range. In Southern Persia salt is mined at several points. It is found on several islands in the Persian Gulf. Over a large part of the country are found salt or bitter lakes. The largest and best known of these is the Urumiah Lake, in Azabiran, which contains brine of extraordinary strength. The lake is 8 metres deep in places, but will not average over 4 metres. The shallow lake dries out partially in the summer leaving its bed crested with white salt. The Bakhtegan Lake, in Taristan, is also large, and there are many smaller ones.

Borax is produced in many places, and is found most abundantly on the border of the Sivdjan.

Alum is found at Zadican and several neighbouring places. There is a yearly production of 550 to 600 metric tons. The value ranges from 50 to 235 francs a ton, according to the purity of the salt. In the Sia-ruh salt desert, north of Teheran, alunite rock is mined. At Ravir, in Eastern Persia, alum is made, and an old chemical process, long forgotten in Europe, is still in use. In this, 50 parts of alum are treated with 50 parts of saltpetre by distillation, yielding 12½ parts of nitric acid.

Saltpetre is found in some places as an effervescence on the surface of the ground, and at other points in caves. The country near Teheran abounds with ancient burial mounds from which saltpetre is obtained by lixivation. The quantity produced cannot be ascertained.

Persia has large mineral resources, which might be developed under better government, but the present production is very small.

THE AMERICAN STEEL COMBINE.

THE legal existence of the Federal Steel Company dates from Friday, September 9th, when the articles of incorporation were filed with the Secretary of State of the State of New Jersey. Negotiations leading up to the combination have extended over three months. The paid-in capital is £40,000,000. It is the largest concern ever registered in the State of New Jersey, although that State, from the character of its limited liability laws, is a favourite one for registration with the organisers of companies which are to carry on business not necessarily in New Jersey, but in any part of the United States The registration fee of the Federal Steel Company, based on its capital stock, amounted to £8,000. The concerns in the new combination are the Minnesota Iron Company, which controls extensive iron-ore mines in the Mesba Range in the Lake Superior country; the Illinois Steel Company, which has a steel-making plant at South Chicago, second in size only to the great plant of the Carnegie Company at Pittsburg and its immediate neighbourhood; the Elgin, Joliet, and Eastern Railway Company, a concern largely engaged in carrying coal and other minerals for the Illinois Steel Company; the Standard Oil Company, in so far as its ore-carrying steamers on the great lakes are concerned; steel-making concerns at Lorraine, in the State of Ohio, and at Johnstown, Pennsylvania; and finally the American Steel and Wire Company, of Chicago, a trust which came into existence in April last, and now has control of fully 75 per cent. of the home and export trade in wire rods and wire. The scope of the new undertaking may best be judged from a quotation from the charter of incorporation—from what in Great Britain would be described as the articles of association. Charters of incorporation in America, like articles of association in Scotland or England, are usually written so as to be sufficiently comprehensive. But in giving this quotation from the charter of the Federal Steel Company, it may be stated that to a greater or less extent the several concerns which have come into the combination are already engaged in the businesses here described. "The objects for which, and for any of which the corporation is formed," reads the charter, "are to do any or all of the things herein set forth to the same extent as natural persons might or could do, and in any part of the world—viz, mining of all kinds, manufacturing of all kinds, transportation of goods, merchandise, or passengers upon land or water; building houses, structures, vessels, ships, boats, railroads, engines, cars, or other equipment, wharves or docks; constructing, maintaining, and operating railroads, steamship lines, vessel lines, or other lines for transportation; and the purchase, improvement, or sale of lands; to manufacture, purchase, or otherwise acquire; to hold, own, mortgage, pledge, sell, assign, and transfer, or otherwise dispose of; to invest, trade, deal in and deal with goods, wares, and merchandise and property of every class and description; to acquire and undertake all or any part of the business, assets, and liabilities of any person, firm, association, or corporation; to enter into, make, perform, and carry out contracts of every kind with any person, firm, association, or corporation; to have one or more offices; to carry on all or any of its operations and business, and unlimitedly and without restriction to hold, purchase, mortgage, lease, and convey real and personal property in any state or territory of the United States, and in any foreign country or place; and in general to carry on any other business in connection therewith, whether manufacturing or otherwise, with all the powers conferred by the laws of New Jersey upon corporations." As will be seen from the foregoing quotation, provision has been made for bringing other firms into the combination. It has been stated in the New York newspapers usually relied on for their commercial and trade intelligence, that the Carnegie firm is to be included in the Federal Steel Company. As yet, however, this statement lacks confirmation. The Carnegie Company draws its ore supplies from the same range as the Illinois Steel Company. New vessels, owned by Mr. Rockefeller, of the Standard Oil Company, are engaged in carrying the ore from Lake Superior to the Lake Erie ports, from which it is conveyed by rail to Pittsburg and other places near by where the Carnegie plants are established. This ore is carried at the rate of one-twentieth of a cent. per ton per mile, by steamers which can load as much as 7,500 tons. The steamers engaged in the trade have been specially built for it. They can be loaded and unloaded most economically, and with great celerity; they are worked with ease and at comparatively small cost, and their introduction to the service has, within the last few years, completely revolutionised the ore-carrying trade on the Lakes.

Our Book Shelf.

Electrolytic Methods of Analysis. By B. Neumann. Translated by J. B. C. Kershaw. pp. 254, including Index. Illustrated. London: Whittaker and Co. 1898. 10s. 6d.

A very useful contribution to the study of electrolytic analysis. The book is divided into three parts, of which the first deals with the theory of electrolysis, the second with the measuring and regulating of the current, and the third with electrolytic procedure. A great deal of the ground has of course already been covered by Smith and Classen, but Neumann's work possesses sufficient distinctive features to justify its existence, especially as it bears abundant evidence throughout of a desire on the part of the author to meet and combat the various difficulties that occur rather than to slur them over as electrolytic enthusiasts are rather prone to do. We quite agree with the emphatic recommendation to combine chemical and electrolytic methods of separation, as we fancy that this is the rock upon which a good many students of electrolytic analysis have come to grief. The translator has evidently a good grasp of the subject, and has performed his task in a praiseworthy manner.

Die Künstlichen Düngemittel. By Dr. S. Pick. pp. 245. Illustrated. Vienna: A. Hartleben. 1898. 3s 6d. (about).

The good old days when ground bricks or any other rubbish could be palmed off upon the unsuspecting farmer as manure are now, fortunately, a thing of the past, and the manufacturer of fertilisers has, like most other people, to face music in which quality and value are the dominant notes. We can recommend the little work before us to those who have abandoned or wish to abandon the rule of thumb which so often regulates the manufacture of manures even at the present time, and have no doubt that they will obtain hints and information which will repay the perusal. Practically all the fertilising materials are treated of, percentages of contents are freely indicated, and the book contains a most useful chapter on analytical methods, which alone should find a place for the work in every manure works laboratory.

Dictionary of Hygiene. By C. T. Kingzette and D. Homfray. 104 pp. London: Baillière, Tindall, and Cox. 1898. 2s. 6d.

This little reference book is neatly got up in a convenient pocket size. It is said to be destined for the use of Medical and Sanitary Officers. As far as the contents are concerned, there is ample evidence of wise discretion and careful compilation. A lot of information is compressed into small compass, much of which will prove interesting and helpful to all who take an interest in sanitation. Apart from the needs of this particular class, however, we hardly see what *raison d'être* the booklet has. Medical and Sanitary officers should already be fully acquainted with most of the information which is given, whether it refers to "Sanitary Statutes" or the virtues of "Sanitas" preparations, which are favoured with about forty references in a total of 104 pages. There is certainly an advantage in the handiness of this particular source of reference which will commend it to many; while officials troubled by defective memories will do well to transfer half-a-crown from their trouser-pockets to their waistcoat-pockets by purchasing a copy of this dictionary.

The Tax Payers' Cash Book. By A. M. Scarff. 3rd Edition. London: Income Tax Adjustment Agency. 1898. 2s. 6d.

This book is ruled for keeping a weekly record of private and business cash accounts including a special summary of the till and bank accounts. The object of following this routine, is that by so doing traders have been able to satisfy the Commissioners of Income Tax on the question of their true profits with much greater ease than when such a record was not forthcoming. By means of it many assessments have been reduced.

Developments of the Borax Co.—The Pacific Borax and Redwoods Chemical Works, Limited, otherwise the English borax syndicate, has filed a trust deed of all its properties on the Pacific coast, to cover a loan of £250,000. which has been made by the Indian and General Investment Trust, Limited, of London, for the purchase or construction, through F. M. Smith, of a large borax plant at Constable Hook, N.J., to which place is to be removed most of the large plant which the Pacific Coast Borax Company has been operating in America. Extensive deposits of borax at Antofagasta, Chile, are also to be purchased. The deed recites that the works control borax mines or factories in San Bernardino, Inyo, and Alameda counties of California; Esmeralda county, Nevada, and in Oregon.

LEAD POISONING IN THE POTTERIES.

I.

A SPECIAL Commissioner has been studying this question on behalf of the *Times*, and the results of his inquiries are interesting in two ways. (1) They show the wanton exaggeration indulged in by agitators; (2) they also show where reforms are really most needed. The following specimen of the methods employed to get up the agitation is instructive. Two ladies—one a resident, the other from London—went to a local doctor who has interested himself in the subject and requested him to find them twelve emaciated babies, whose parents had worked in the lead. He refused, and they never found those babies. English mothers will appreciate the good taste, the consideration for the parents, and the scrupulous honesty of this attempt to hunt up domestic affliction for the purpose of making a public show of it and parading it as typical of pottery life. Another equally revolting form of advertisement is the device of sending patients up to London and describing their symptoms in the papers. Proceeding the Commissioner says:—I have the word of the doctor who sends them that it is of no benefit whatever to the patients, who might be treated just as well at the Staffordshire Infirmary. The hospitals are glad to have them as object lessons for students and perhaps for purposes of experimental treatment, as lead poisoning is an obscure and, from the medical point of view, interesting affection; the rest is sheer advertisement. Then we have the lurid descriptions of pottery life, the streets filled with living skeletons, pallid and emaciated wretches, who are being done to death in the awful workshops into which they are thrust by their inhuman task-masters, to toil for a miserable pittance until they fall victims to a dreadful and inevitable disease. This is the picture drawn for our edification The experienced public has not taken it very seriously, and there would be no need to refer to it but for two things. The agitation has by no means come to an end, and since it affords a good stick to beat the Government with, no effort will be spared to revive it. Secondly, the highly-coloured accounts hat have gone forth to the world have aroused deep and general resentment in the Potteries. All classes feel that an unmerited slur has been cast upon the community, and they are anxious to be set right in the eyes of their fellow-countrymen. Some general observations, therefore, will not be out of place. Superficially

THE DISTRICT

wears the dreary aspect common to manufacturing towns, and so deceptive to strangers accustomed to the country or to villadom. They see nothing but the grime and sqalior, and though these are less marked in the Potteries than in many industrial centres there is quite enough to catch the eye and give an impression of dreariness. It soon disappears on a nearer acquaitance. The people take life in anything but a dreary fashion. They are bright, alert, and intelligent in a high degree, pleasant-mannered, and generally prepossessing. They have somehow got the name of being very rough—was not the celebrated legend of the man-and-dog fight located in Hanley?—and there may be some rough customers among them; but, to speak generally, no epithet could be less applicable. I have mixed with them day after day in the factory, the street, and their own homes, and every approach has invariably met with the most friendly and courteous response. In the Potteries one acquires an unusual confidence in tackling strangers; one may stop the roughest-looking man in the street or knock at the least inviting door with the certainty of a civil answer. That, at least, is my experience. The working people seem to be exceptionally free from the suspiciousness and class-antagonism which mark their demeanour in many localities. They know how to respect themselves and others. Their relations with their employers are quite in keeping. Trade unionism has no attraction for them, and disaffection is extremely rare. In going through dozens of workshops and conversing with the hands I have been unable to discover a trace of antagonism, save in one instance. Their ordinary demeanour towards the master is cheerful, frank, and friendly, free alike from servility and sullenness. It is a pleasure to see such cordial relations. Recent accounts of their miserable condition are the subject of open derision in the workshops. As for their physical appearance, it is surprising to find so few outward signs of the unhealthiness of the trade. Here and there you may see a sickly-looking woman, a pasty-faced lad, or a broken-down man. These represent the cases which ought to be and in future, it is to be hoped, will be excluded from the factory. They are exceptions. The rest do not compare unfavourably with other workpeople; robust forms and healthy faces are plentiful among them. The locality is hilly and must be naturally very healthy, for in spite of some grave sanitary defects, in spite of female labour and infant mortality, the death-rate is comparatively low. The standard of comfort among potters is fairly high. The men earn very good wages, running up to several pounds a week, and the hours are short; women can make from 10s. to 30s. a week; while the earnings of boys and girls, though small in themselves, make a great difference in the home comfort. For these reasons potters suffer, as Dr. Arlidge has pointed out, far less than other workpeople in the same district from diseases due to exposure and want of nourishment. Then much of the work is quite harmless, particularly in some of the sections in which girls and women are employed. It is pleasant to see the rows of healthy and happy young girls engaged in the light, elegant, and in every way suitable work carried on in the decorating department of a large factory. Much obloquy has been thrown on the employers, and of course it is impossible to answer for all of them. They vary, no doubt, like other people; but from outside testimony and personal observation I am satisfied that, as a class, they do not deserve the imputations that have been cast upon them. Mr. Wilson himself brings no accusation against them, and disinterested persons, who have the best opportunity of knowing, bear emphatic witness to their humanity and interest in the welfare of the workpeople. Mr. Folker, a medical practitioner of high standing, who has been factory surgeon to the Hanley district ever since factory surgeons were created, said to me, "As for the talk about compelling the masters, it is all nonsense; there is no need for compelling; they are willing to do everything in their power. In all my experience I have never had to make a suggestion which was not readily complied with."

To sum up my general impressions of the Potteries, I should say that, in spite of the poverty and sickness incidental to a manufacturing community, the mental and physical standard is decidedly high. The prevalence of good looks among the young people is striking. They are well dressed, well mannered, vivacious, and independent; they hold their heads high and enjoy life thoroughly. The Potteries support more theatres and places of entertainment in proportion to the population than any place in the kingdom, and the working-class audiences are well worth seeing. In appearance and intelligence they will bear favourable comparison with those to be found anywhere. Free libraries, out-door recreations, and the other modern means of improvement are not wanting. In fine, the Potteries have no reason to think themselves behind the rest of the world. To see the populace turn out on Sunday in their holiday attire is to understand why the idea of being held up to compassion is both absurd and odious to them. How much mischief from lead poisoning is hidden under this creditable exterior I shall discuss in my next communication.

THE GLASGOW TECHNICAL COLLEGE.

THE PROPOSED AGRICULTURAL COLLEGE.

AT the last meeting of the Governors of the Glasgow and West of Scotland Technical College, Dr. Dyer, in moving approval of the minutes of the meeting of the Committee on Teaching and Staff, in which appeared the Scotch Education Department's amended scheme for the proposed agricultural college, stated that they proposed to convert what they at present called the Agricultural Committee of the College into practically an independent governing body, and to make the agricultural department of the college to a large extent an independent college, which would be affiliated to, and connected with, both the university and the Technical College. It was hoped in this way to receive the support of County Councils and other bodies which had considerable means at their disposal for the support of agricultural education. The Teaching Staff Committee recommended the governors to accept the scheme, under which provision was also made that the new governing body be bound to provide, both at Glasgow and Kilmarnock, facilities at least equal to those at present afforded in each of these places.

Mr. Russell, in seconding, stated that the representatives on the governing body were to be elected from the ten counties of the south-western educational district of Scotland, from the governors of the Technical College, from the university, and other bodies. It might be with a feeling of regret that the college would part with this department, of which they had watched the growth for twelve years, but it was thought that in the future it would do good work, and be of service to the whole community.

The minute was adopted.

A NEW PRIZE.

Dr. Dyer stated that Nobel's Explosive Company had offered a prize of £30. to be awarded annually to a student in the chemical laboratory of the college under certain conditions, and the secretary was instructed to accept the gift and to thank the company for it.

BURGLARY AT A SOAP WORKS.—The Gleniffer Soap Works, Barrhead-road, Paisley, were broken into during last week. In the office various lock-fast places were broken open, but only about seven shillings in penny stamps were taken away. The burglars also made an effort to break into the office safe. The police have apprehended wo men in connection with the burglary.

ON BI-SULPHIDE AND THE FACTORY ACTS.

e North London Police Court on Tuesday, Messrs. J. G. gram and Sons, india-rubber manufacturers, Chapman-road, wick, were summoned before Mr. Bros with breaches of the ules made under the Factories Acts by the Secretary of State. Breton prosecuted for the Treasury; and Mr. E. J. Noldrit, , defended. Mr. Le Breton said that the first summons the defendants with employing a child of 13 in a room in which de of carbon was used. Mr. Noldrit said that the case was e court on July 26th, and it was then represented that it would ssible to carry on the business at a profit if men had to be d to do the work. The case was adjourned in order that the ecretary might be petitioned to relax the rules. No time had t in laying the matter before the Home Secretary, but at o definite reply had been received to the petition. He asked ther adjournment pending the Home Secretary's reply. Mr. n opposed the adjournment. Mr. Bros said he should deal case, but he first wished to know if any young persons had ployed in the room since the adjournment. Mr. W. H. Seale, nspector, said that, so far as his information went, no young ad been so employed. Mr. Noldrit.—No, we gave an under- nd have kept to it. Mr. Bros imposed a penalty of 20s., with ts. Mr. Le Breton said that there was a second summons the defendants with having employed Albert Took, 18, for a eriod than 2½ hours and for more than five hours in one day in a which bi-sulphide of carbon was used. Mr. Noldrit said that t of this rule would be that men would be employed for only usual time. This point was also under the consideration of ne Secretary, and he pressed for an adjournment. As the opposed, the case was heard. Miss Anderson, one of the pectors under the Act, said that she visited the factory, and k at work in the room in which the bi-sulphide of carbon was ed. Took, called as a witness, said he had now left the de- employment, but on June 21st he worked in the room in from 6-30 a.m. until 6 p.m., with intervals of half-an-hour kfast and an hour for dinner. In cross-examination he ad- hat the carbon was not used more than three days a week, and fore breakfast. In re-examination, the witness said that those nplained to the firm that the special rules were not being with, were told to put on their coats and go home. Mr. Le aid that the occupation had been declared dangerous to health, lid not anticipate that the rules would be relaxed. The Home y had absolutely refused to listen to the petition until a con- had been obtained. In reply to Mr. Bros, the defendants d that they could not undertake to conform to the special rules uture. Mr. Bros said that in those circumstances he should fine of 21s., with 4s. costs. Mr. Noldrit asked that no further ngs should be taken until the Home Secretary had given his Mr. Bros.—I have no control over the factory inspectors.

BIRMINGHAM SEWAGE FARM.

THE TREATMENT OF THE LAND.

ETING of the Birmingham Tame and Rea District Drainage oard was held last week at the Council House: Alderman residing. On the motion of the Chairman, seconded by Dr. the seal of the Board was affixed to the mortgage in respect of of £100,000. from the Public Works Loan Commissioners for chase of additional land and the works incidental thereto. or Hughes (Handsworth) brought up the report of the Works tee, and moved that the tender of Messrs. Lowe and Sons, of n-Trent, for the outfall conduit No. 3 (the second contract for uthorised by the Act of 1897) be accepted. Mr. Hughes d that Messrs. Lowe had done important works under the of Mr. Hawksley, and their tender, £8,550., was the lowest. lution was adopted. In moving that the Board accept the f Mr. John Mackey, of Hereford, for the alteration of the small Saltley (hitherto used in cases of storm only) in order that ht be used for precipation purposes, Mr. Hughes said that the were obtained in the form of schedules of prices. There were ders, and Mr. Mackay's was the most favourable. It was d that the work would amount to £2,344., and certain addenda contract would bring the total to about £3,000. The work sist very greatly in the disposal of the sewage. The motion een adopted, Mr. Hughes proposed that the Board purchase ssrs. Fowler and Co., of Leeds, an engine, two ploughs, and nances, at a cost not exceeding £1,210. 15s. He said that it ssary to plough the land to a very great depth, and their ploughs were not equal to the work. There would also be a al of extra work in connection with the new land. The n was adopted, and the Board also, on Mr. Hughes's on, resolved to renew for the ensuing twelve months the contract with Mr. Holt for the purchase by him of the whole of the milk produced on the farms of the Board. Mr. Hughes then moved the approval of the Works Committee's report as a whole. Dr. Barratt, in seconding the motion, said that the Board, by purchasing the crops on Mr. Wakefield's farm at reasonable prices, had come into possession of a portion of the new land a little earlier than they had expected. Not having enough strength in their own farm appliances, they had hired a steam cultivator, at a cost of £60. or £70., and the result had been that some sixty acres of worn-out dirty grass land had been thoroughly worked up. This, it was considered, would be of great benefit, as they would be able to use the sewage upon the land some four or five months earlier than otherwise. They were very desirous of getting on to the new land at the earliest moment. For the purpose of expediting precipitation they were using

DOUBLE THE QUANTITY OF LIME

they were using four months ago. They were also using some tons of caustic lime on the land, which was very foul and out of condition from being over-worked with sewage sludge. These measures, they believed, would effectually answer those two points. When they came into possession of their new land, to the extent of 1,000 or 1,200 acres, they would be prepared to use it at the earliest moment. For the purpose of more thoroughly purifying and clarifying the sewage three things were essential. First, they must have plenty of land; next, they must have intermittent irrigation of the land; and thirdly, they must have intermittent filtration on that land. There was all the difference in the world between intermittent and continuous filtration. They intended to send nothing upon the land but what would go through it in the most advantageous circumstances, with a view to thoroughly purifying the whole of that which came upon and through the land. To do that effectually all the treatment must be intermittent, and, that being successfully carried out, they would send nothing into the River Tame from their establishment except that which had been thoroughly well purified. With regard to the report prepared for presentation to the joint committee of the City Council and the Staffordshrre County Council with respect to the pollution of the Tame, Professor Dewar had undertaken, in consultation with Mr. Charles Hawkesley, to deal with the chemical and engineering points raised therein, and their report would be ready soon.

LIME TREATMENT CONDEMNED.

Dr. Evans (Erdington District Council) said he looked upon the use of lime in the precipitation tanks as the cause of all their troubles on the farm. It was very well known that in the works of Birmingham a very great quantity of vitriol was used, and this must be neutralised, but by neutralising it with lime they got a deposit which was most insoluble. Something like 40,000 tons of lime had been used, with the result that now much of the land was impervious to water. With the extra quantity of lime they were now using in the tanks and with the caustic lime they were placing on the land their troubles were likely to become worse.

ALKALINE COAL!!!

He thought it should be a recommendation to the Works Committee to see if they could use something which would be more porous and yet alkaline—for instance, coke or coal. They were purchasing a powerful steam plough, but what would be the use of that if they were simply turning over concrete? When they had land already saturated with sewage and saturated with lime, to put additional lime into the sewage and to put lime on to the land in a caustic state would only increase their difficulties. Agriculturists knew that lime used in moderate quantities might be beneficial, but in the large quantities in which it was now proposed to use it it would be extremely injurious. He was a member of the Works Committee, and had already expressed his views on the subject. The Chairman said that the committee were acting under the very best expert advice, but Dr. Evans would have an opportunity on the committee of suggesting other substances instead of lime, and anything he might say would receive attention. The committee had an open mind, and were only anxious to do what was best. Mr. Hughes replied that the committee had followed the advice of the best experts in the kingdom, and until these changed their opinion he thought the committee were justified in their present course. The report having been approved, the Board adjourned.

CHEMICAL INDUSTRY IN CALIFORNIA.—The Pacific Coast is beginning to have an important chemical industry. Sulphuric acid is made on a rather large scale at two works, while the manufacture of bluestone and boracic acid, carbonic acid, epsom salts, magnesia, citric acid, and numerous other products is now carried on. The State of California has great natural resources upon which to base an important chemical industry, and its geographical position gives it an advantage in supplying certain markets of the Pacific Slope, so it is probable that a more important and interesting chemical industry will grow up there when the transportation problem is settled.

Trade Notes.

Exit Alkali Works.—After many rumours it appears to be true that the Mathieson Works of the United Alkali Co., at Widnes, are to be closed. By a piece-meal process the various plants have been shut down, and now the caustic plant—the sole survivor—is to be served the same way. We also learn that the Seaham Harbour Chemical Works, which are owned by the United Alkali Co., and have been idle for a considerable period, are being dismantled, the ground on which they stand being required for sidings in connection with the new deep-water dock scheme. Seaham Harbour Chemical Works were founded in 1865 by the late Mr. J. Watson, who was previously with the Washington Chemical Works, in partnership with the late Mr. Kipling.

Contract for Sewage Pumps.—Messrs. Fleming and Ferguson (Limited), Paisley, have secured a contract from the Corporation of Coventry for the supply of pumping machinery in connection with the new sewerage works there. The order comprises four vertical triple expansion pumping engines with boilers and accessories.

Electrical Installation Rules.—The Liverpool, London, and Globe Insurance Co. have sent us an advance copy of a supplement to their Electric Installation Rules. It deals with regulations concerning special risks such as central stations, oil and corn mills, theatres, and drying stores. The rules are concise and full of useful suggestions.

Utilizing Noxious Gases.—A new and interesting development in the chemical industry of the United States is the utilization of the sulphuretted hydrogen gas developed as a by-product in the refining of asphaltum at the California Asphaltum Company's works at Ventura, Cal. The gas is burned to sulphurous anhydride in the usual well-known manner, and the product of the combustion is conveyed to the lead chambers for use in the manufacture of vitriol. Owing to the method of its production the gas is of a high degree of purity, and the acid produced is also of high grade. At present the output amounts to ten tons per day, when the works are run at their full capacity.

Drinking Caustic Soda for Lime-juice.—On Wednesday, Mr. Brighouse held an inquest at St. Helens on a labourer, James Summers, 28 years old, 112, City-road, who died from the effects of caustic soda poisoning. Summers, who was employed at Pilkington's works, went to a cupboard in search of lime-juice and took caustic soda solution instead. The caustic soda taken was kept in a cupboard by the driver of the electric crane. He was the man who doled out the lime-juice, which, however, was kept in another cupboard. The bottle containing the caustic soda was labelled, but the label was overlooked by the deceased. The jury returned a verdict of death from misadventure.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols for once in a way are a shade firmer, and the price has been advanced to 9½d. for 90's and 50/90's and possibly 10d. for 50/9c's in certain localities, though the latter price is largely nominal. Carbolic acids are unchanged. Crude naphtha is firm, but there is no quotable alteration in price. Solvent steady. Pitch is showing signs of greater activity at 25s. f.o.b. East Coast. Anthracene neglected.

Sulphate of ammonia is suffering rather from the old complaint—debility. Buyers having scented a possible weakening of prices are very abstemious. Beckton is offering for Oct./Dec. delivery at £9. 13s. 9d., and Jan./March £9. 15s. Closing prompt values are:—Beckton ——; London outside makes, £9. 18s. 9d.; Liverpool, £9. 18s. 9d.; Hull, £9. 17s. 6d.; and Leith, £9. 17s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is moderately active for present and early delivery, and there is considerably more inquiry for next year. Bleaching powder, under the competition of rival sellers, continues to have a downward tendency for future delivery. For present delivery the quotation remains at £5. f.o.r., and hardwoods £5. 10s. to £5. 15s. f.o.b. Liverpool, according to destination. Ammonia alkali is steady at £4. 2s. 6d. bags, makers' works. Soda crystals and bicarbonate are firm in price and in good demand. Caustic soda is rather easier, and prices are nominally unchanged for prompt delivery, current quotations f.o.b. Liverpool being as follows:—77% £7. 17s. 6d.; 74% £7. 12s. 6d.; 70% £7. 2s. 6d.; 60% £6. 2s. 6d. nett per ton. Chlorate of potash has advanced during the week to 3¾d. per lb; soda *3¾d. to* 4d. per lb. Sulphur is steady at £4. 12s. 6d. f.o.r. Saltcake firm in bulk at 26s. 6d. per ton f.o.r. Vitriol and muriatic acids are in good average request, but without change in price. Sulphate of copper is a firm market at £17. 5s. to £17. 10s. for prompt and forward shipments. Brown acetate of lime is dearer at £5 2s. 6d. to £5. 7s. 6d. c.i.f.; grey, £7. 5s. f.o.r. Manchester. Acetate of soda, £11. 15s. c.i.f. White sugar of lead, £26. c.i.f. Acetic acids unchanged. Oxalic acid 3d. per lb. White powdered arsenic is a firm market, with advancing tendency at £17. Garston for best brands, prompt delivery, and £18. for Nov. Dec. Potash, caustic and carbonate, are in good steady inquiry, both for prompt and forward. Yellow prussiate of potash firm at 6⅝d. per lb.; cyanide, 1s. 1d. per lb. Borax has advanced to £14. per ton. Phosphate of soda still offers at £9. 15s. to £10. c.i.f. Zinc salts are firm. Bichromates are unchanged. In miscellaneous chemicals the trade is still dull, and in consequence of active competition prices, generally, rule low.

REPORT ON MANURE MATERIAL.

Business during the past week has been quiet, though prices generally are fairly maintained.

High grade phosphates are still in request on the Continent, but U. K. buyers do not, so far, seem inclined to pay the advanced prices now asked.

£4. 15s. per ton is still the quotation for East India bone meal for shipment, ex quay Liverpool, but at this figure business at present hangs fire.

Nitrate of soda is quiet but steady on spot, and for fine quality 7s 9d. per cwt. is asked, and 7s 6d per cwt. for ordinary quality.

THE METAL MARKETS.

LONDON, Wednesday—Pig iron quiet: Scotch warrants closed at 48s. 0d; Middlesbro', 43s. 2d cash; and hematite, 54s. 6½d. Copper quiet: Chili bars, G.O.B.'s and G.M.B.'s, closed £52. 2s. 6d. to £52. 7s. 6d. cash, and £52. 5s. to £52. 10s. three months. Tin steady: Straits closed at £74. 3s 9d. to £74. 13s. 9d. cash, and £74. 10s. to £75. three months; Lead steady: Spanish, £12. 17s 6d. to £12. 18s. 6d.; English, £13. 2s. 6d; Silesian spelter, ordinary, £22. Nickel, 1s. 2½d. Antimony, £36. 10s. 0d. to £37. Quicksilver: First hands, £7. 5s; second hands, £7. 4s 0d. *Copper shares* quiet: Cape, 4 1/16 to 4 1/8; Copiapo, 2¼ to 2⅜; Libiola, 2 to 2¼; Mason and Barry, 3⅛ to 3⅜; Rio Tinto, 29 7/16 to 29 5/16; Tharsis, 6⅞ to 7.

GLASGOW, Wednesday.—Market flat, but a good business. Scotch done at 48s. 2d. to 48s. 0½d. cash, and 48s 3d. month; buyers, 48s. cash; sellers, 48s. 0½d. Cleveland done at 43s. 5d. month; buyers, 43s. 2d cash; sellers ½d. more. Cumberland hematite done at 54s. 9d. month; buyers, 54s. 6½d. cash; sellers, 54s. 7d. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil firm, with prices favouring sellers. Lagos has been done at £21.; Cameroons, to arrive, £19. 2s. 6d., both in transit. Olive is only in moderate demand, but prices continue firm, and holders steady. Linseed is well held, sellers asking 18s 6d. to 19s. per cwt. for Liverpool makes in exports casks. Cottonseed steady at 16s. to 16s. 3d. for Liverpool refined. Castor oil firm. Business has been active, but mostly at figures not announced. Good seconds Calcutta is quoted 3 1/16d. per lb.; French and Madras 3 1/16d. per lb. Tallow keeps firm, and in good request at full prices. Resin is steady for spot in all grades, with a prospect of an advancing market in the near future. Spirits of turpentine steadier, with a fair business doing at 22s. 6d. to 22s. 9d. per cwt. Petroleum firmer, with Russian refined 5¼d. and American 6d. to 7¼d. per gallon.

CAKES.—American Western linseed are again the turn firmer, and prices have further improved partially 2s. 6d., with a fair consumptive demand experienced at £6. 8s. 9d. to £6. 15s., whilst for Liverpool makes the recent quotation was well maintained with a better demand experienced, owing to the sharper weather now prevalent, and sellers still quote £7. 5s. to £8. per ton, according to brand. A firm tone rules in the market for American decorticated cottonseed, and higher prices are now quoted for good to choice brands, the value being given at £5. 10s. to £5. 17s. 6d. per ton, according to quality, with moderate sales making thereat; Liverpool makes continue to meet a steady inquiry at former currencies, viz., £5. 15s. to £6. 10s. per ton. There is rather a better feeling in the market for undecorticated Liverpool makes, and the lowest quotation has been advanced slightly, with a fair trade passing at £4 to £4. 7s. 6d., according to brand, and Egyptian on the spot are also the turn dearer, with a firmer market, and a fair business doing in spot parcels at £3. 15s. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s;

s, 50s., and common, 18s.; Devonshire, 40s. to 45s.; , J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red changed. Venetian red: £6. to £10. Cobalt: Prepared 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7; n, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

ULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

S.—In sympathy with oil seeds all their products are reaching ed values, which tends to a restriction of business. There are umours here of some invention which is about to revolutionise lustry of seed crushing and oil refining, especially as applied to seed oil; in such things, however, it is advisable to leave the to speak for itself. Amongst the principal imports to date are lowing, as against the same time a year ago. Wheat, 2,105,432 ainst 1,628,104 qrs.; flour, 190,718 cwts. against 286,252 cwts; , 288,228 qrs. against 458,300 qrs.; rapeseed, 56,940 qrs. 60,140 qrs.; cottonseed, 133.701 tons against 135,573 tons; , 9,587 tons against 7,583 tons; olive oil, 5,474 tuns against tuns; tar, 3,679 barrels against 13,218 barrels. Linseed oil is irm, spot, 16s. 7½d. to 16s 9d. per cwt.; Oct.-Dec, 16s 3d. Jan.-April, 16s. 1½d asked; boiled £1., and refined £1. 10s. n extra, naked. Refined cotton oil, spot, naked, quoted ½d; forward Nov.-April, 13s. 6d asked; crude do., 13s. 10½d. barrels £1. 10s. and ordinary casks £1 per ton extra. Castor tracted here—cold drawn (pharmaceutical), in barrels, 30s 6d. t.; in cases 3¾d. per lb.; pure first pressure 28s. per cwt, rels, 3 1/16d. per lb. in cases; second pressure 27s. per cwt., in , 3 1/16d. per lb. in cases. Olive oil steady and unchanged. Olive p firm and unchanged. Oleines £18. 10s. for brown, f.o.b. ental ports. Resins unchanged Pine oil, £8. per ton. Cod 16. to £18. per ton. Brown grease unchanged.

KES.—This has been a bad season for the millers who should egin to find employment better, but such, except in special es, is not the case. Linseed cakes quiet demand but prices : 95% pure £7. 10s. to £7. 12s. 6d. per ton. Oilcakes (linseed) s. to £6. 12s 6d; Russians, £7. to £7. 2s 6d. Cotton cakes best makes, £4. 2s. 6d.; seconds, £4; decorticated, £6. per Rape cakes unchanged.

NTS.—Prices unchanged; also the same applies to disinfectants.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

belief that the approach of the month-end would partially stiffen rket in sulphate of ammonia has been justified. On Friday, 23rd £10. spot was paid in Glasgow. A holiday has interrupted busi- nce, but the feeling to-day seems to be no less promising than it hough there are no fresh transactions put on record as yet. The d market is idle. The chemical products of shale distillation are tty firm, and one of them (naphtha) is now fetching more as the 's demand increases, the present value being quite 7d. per gallon. g oils are now getting into considerable daily deliveries ex con- for the season, the early touch of frost having done some little o this corner of the market. The market for chemicals generally ues slow, but sulphate of copper is again dearer. Otherwise there lly any change of price.

f prices current are:—Soda crystals, £2. 5s. to £2. 12s 6d. nett, soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. Glasgow; caustic soda, white, 74° £7. 12s. 6d, 70/72° . 6d, 60/62° £6. 2s 6d., and cream 60/62° £6, all nett, Liver- leaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 25s od.; English refined, £13. 10s, and boracic acid, £25 nett, Glasgow; onate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., iverpool; bichromate of potash, 3½d. less 3½%, for Scotch and h deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate , 2¾d. less 3½%, for Scotch and English deliveries (for export, nett, f.o.b. Glasgow); chlorate of potash, 3½d less 5%, Liverpool; of soda, 7s. 7½d. to 7s. 9d; sulphate of ammonia, £10, prompt, Leith; salammoniac, first and second white, £35. and £33 nett, rt; sulphate of copper, £17. to £17. 5s., less 5% Liverpool; n scale, hard, 1¾d. to 1½d. per lb., and soft 1½d. per lb.; n wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin spirit ha), 7d. per gallon; paraffin oil (burning), No. 1, 6d., ystal, 6¼d., at Glasgow and other big centres, for Scotch buyers sh sales a shade lower); ditto (lubricating) 865° £4. 10s. to s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. s imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

chemical trade is still dull though shipments lately have hat improved. Prices remain practically unchanged. Soda crystals £2. 12s. 6d. per ton, gross weight, locally. Sulphur £4. 15s. per ton. Caustic, 70% £7. 5s. per ton; 76/77%, £8. per ton. Bleach, £5 5s. to £5 10s. per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do. hards, £5. 10s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 5s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. per ton, nett; sulphide of barium crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—In the coal trade here the market generally is weaker for most qualities. Gas coals are, however, steady with an increasing consumption. Coke is also firm and in strong demand locally. Best Northumbrian steam, 9s 6d. to 10s. per ton; second qualities, 8s. 6d. to 9s. per ton; small steam, 5s. 6d. to 6s. per ton; bunker coals, 8s. 6d. to 9s. per ton; gas coals, 10s. to 10s 6d. per ton; coke steady, 18s. to 20s. per ton.

New Companies.

Brown's Ammonia Co., Ltd.—CAPITAL £3,000. in £1. shares (1,500 preference) This company has been formed to acquire the business now carried on by J. T. Blackie at 2, Bedford-street, C.-on M., Manchester, as Brown & Co., and to carry on the business of ammonia distillers, drysalters, chemical manufacturers, etc. The first directors are J. T. C. Blackie (managing director) S H. Dawson and W. Shawe; qualification, 50 shares; remuneration, £50. each per annum. Registered office, 2, Bedford-street, C.-on-M., Manchester.

G. & J. Rawstorn, Ltd.—CAPITAL £30,000. in £1. shares. This company has been formed to acquire the businesses carried on at Hull by G. & J. Rawstorn,, Ltd., and R. Barton respectively, and to carry on the business of oil, turpentine, and resin manufacturers, merchants, refiners, etc. The subscribers to the memorandum of association are:—W. T. Johnson, 78 79, High-street, Hull, yeast merchant; C. D. Clayon, Broxholme, Doncaster, colliery owner; J. C. Midgley, 11, Vincent-street, Bradford, wool merchant; T. W. Allen, Charlotte-street, Hull, timber merchant; R. Barton, 18, Commercial-road, Hull, oil merchant; G. A. Holmes, 20, High-street, Hull, seed oil merchant; C. Muirhead, Longate, Hull, merchant.

Juliette Phosphate Mining Co., Ltd.—CAPITAL £15,000 in £1. shares. This company has been formed to acquire, own, and work any mines and lands supposed to contain phosphates in the U.S.A., Canada, or elsewhere The subscribers to the memorandum of association are:—J. Clough, Haincliffe, Keighley, spinner; R. Clough, Beechcliffe, Keighley, gentleman; P. Smith, Hillbrook, Keighley, machine maker; W. Sugden, Cullingworth, soap manufacturer; J. Sugden, Hamworth, Dockroyd, near Keighley, spinner; W. E. Tetley, 8, Piccadilly, Bradford, solicitor; J. R. Whitley. Temple Buildings, Bradford, chartered accountant.

"Venora," Ltd.—CAPITAL £15,000. in £10. shares. This company has been formed to acquire the business carried on by T. D. Archer at 1, Crown Soap Work, Hull, and at Liverpool, and to carry on the business of soap, perfumery, glycerine and toilet requisite manufacturers, dealers in chemicals and drugs, etc. The subscribers to the memorandum of association are:—T. D. Archer, Rosemount House, Hessle, E. Yorks, merchant; J. C. Archer, Moorfield House, Bridlington Quay, manager; Mrs. T. D. Archer, Rosemount House, Hessle, E. Yorks.; O. J. H. Davis, 5, Tothill Avenue, Plymouth, merchant; E. F. Anthony, 4, Princess Square, Plymouth, solicitor; J. Lees, 81, Naylor-street, Liverpool, manager; E. H. Wild, 45, Field-street, Hull, manager.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J. LOCKWOOD and R. A. HOLDEN, manufacturing chemists, Manchester, under the style of Lockwood, Holden, and Co.

BANKRUPTCY ACTS, 1883 and 1890.
Adjudication.

BRYANT, W. S., Bristol, manure merchant.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 17th.

Acetate of Lime—
U. States, 750 bgs. H. Wallace & Co.

Acetic Acid—
Holland, 102 pks. A. & M. Zimmermann
" 136 J. Harrison
" 70 Little & Johnston

Acetone—
Germany, 2 dms. Petri Brs.
Austria, 10 brls. D. T. Domeier & Co.
Belgium, 2 pks. E. Catlin

Alkali—
Belgium, 30 c. F. Smith

Alumina Sulphate—
Germany, £82 H. Wallace & Co.

Ammonium Nitrate—
Holland, 65 cks. S. E. Rly. Co.

Antimony Ore—
Spain, 10 t. Novelli & Co.
" 20 J. Bamber

Asbestos—
Canada, £1,130 W. Byford
Germany, 80 Craven & Co.
France, 63 Mery & Co
Germany, 75 Snowdon, Sons & Co.
Belgium, 283 Imperial Asbestos Co.

Barium Chloride—
Germany, 34 cks. Petri Bros.

Barytes—
Belgium, 87 pks J. L. Lyon & Co.
Germany, 29 "
" 20 P. Jantzen
Belgium, 34 O'Hara & Hoare
" 18 W. Harrison & Co
Holland, 18 J. Kitchin Ld.
" 24 O'Hara & Hoar

Basic Slag—
Belgium, 195 t. Anglo-Contl. Guano Wks.

Bleaching Powder—
Germany, 37 pks. J. M. Steel & Co.
Holland, 42 "

Bromine—
Germany, 20 cs. A. & M. Zimmermann

Caoutchouc—
Chinde, 24 c. Hale & Son
Germany, 9 Major & Field
Zanzibar, 17 "
Madagascar, 41 Kleinwort, Sons & Co.
" 12 L. & I. D. Jt. Co.
Rangoon, 101 c. "
Africa, 14 "
Germany, 13 Prop. Bull Wf.
Zanzibar, 99 L. & I. D. Jt. Co.
Straits, 100 Kleinwort, Sons & Co.

Castor Oil—
Belgium, 50 brls. C. & E. Morton
France, 7 Grindley & Co
" 7 L. & I. D. Jt. Co
Italy, 2 cs. Major & Field

Caustic Potash—
Germany, 80 pks. D. T. Domeier & Co., Ld.
France, 20 Petri Brs.

Chemicals (*otherwise undescribed*)
Germany, £535 L. & I. D. Jt. Co.
" 711 A. & M. Zimmerman
" 14 Vinolia Co
Belgium, 63 John Cockerill Line
" 168 T. H. Lee
Denmark, 81 Crosse & Blackwell
Germany, 9 Butler's Wf., Ld.
Holland, 160 B. & F. Wf. Co.
" 9 T. H. Lee
" 150 A. & M. Zimmermann
Belgium, 90 T. Palmer
U. States, 27 C. F. Gerhardt
Germany, 50 Craven & Co.
N. Zealand, 90 L. & I. D. Jt. Co
Holland, 103 Hernu, Peron & Co.

Cream of Tartar—
Belgium, 10 pks. Kirpatrick, Barr & Co.
France, 15 F. C. Devon & Co.
" 4 Blackmore, Leconte & Co.
" 10 W. C. Bacon & Co.

Dyestuffs—
Aniline
France, 1 pk. E. Flageollet & Co.

Annatto
France, 2 pks. B. & F. Wf. Co. Ld.

Anthracene
Holland, 162 pks. Burt, Boulton & Co

Argols
Italy, 320 pks. B. Jacob & Sons

Cochineal
S. Africa, 20 pks. J. Owen
Canaries, 3 W. M. Smith & Sons
" 13 Swanston & Co.
" 4 Hendry & Martin

Cutch
Rangoon, 600 pks. Leach & Co.

Extracts
Holland, 42 pks. Prprs. Dowgate Dk.
Austria, 200 Boutcher, Mortimore & Co
" 34 Fellows, Morton & Co.
U. States, 25 L. J. Levinstein & Sons
France, 260 cks. "
" 1-1 pks. Bennett S. S. Co.
" 400 Union L. Co., Ld.

Fustic
W. Indies, 29 t. P. Macfadyen & Co.
" 5 G. T. Benton & Son

Indigo
E. Indies, 16 chts. Parsons & Keith
" 11 Park, Macfadyen & Co.

Logwood
W. Indies, 18 t. G. T. Benton & Son

Myrabolams
E. Indies 1,000 pks. P. & O. Co.

Saffron
Spain, 2 pks. J. Knill & Co.

Shumac
Italy, 130 bgs. J. Kitchin, Ld.
" 14 Irving

Tanners' Bark
Natal, 38 t. Boutcher, Mortimore & Co.
" 25 Flack, Chandler & Co.
" 11 T. Rennie, Son & Co.
" 23 A. & W. Nesbitt

Turmeric
E. Indies, 100 bgs. H. Devitt & Co.

Valonia
A. Turkey, 42 t. Hicks, Nash & Co.

Dyestuffs (*otherwise undes.*)—
France. 4 bls. Bennett S. S. Co.
E. Indies, 5 pks. L. & I. D. Jt. Co.
France, 8 W. Burton & Sons

Farina—
Holland, 100 bgs. H. Lorenz
" 100 90 J. Knill & Co.

Glucose—
U. States, 1,500 pks. 1,5 0 cwts. Pearce Pelly & Co
" 200 200 Humphrey & Co
" 2,520 2,500 Fellows, Morton & Co.
" 750 750 Beck & Pollitzer
" 500 500 H. Hughes & Co
" 35 200 C. A. & H. Nichols
" 50 300 C. Southwell & Co.
" 150 500 Page, Son & East
" 50 284 C. & E. Morton
" 250 1,438 W. Grose & Co
" 2,945 8,520 R. G. Hall & Co.
" 50 290 A. E. Piggott
" 100 580 L. Norman & Co., Ld.
" 100 600 E. & T. Pink
" 2,000 2,000 E. Thompson & Co.
Germany, 50 405 Deering & Robottom
U. States, 125 794 Lon. & Til. Ltge. C. & D. Co.
" 300 300 L. Sutro & Co.

Glue—
France, £50 W. L. Davies & Sons
" 41 Mory & Co
U. States, 15 L. & I. D. Jt Co
Belgium, 528 R. G. Hall & Co.
Germany, 108 Phillipps & Graves
" 600 Deering & Robottom
France, 68 J. Harrison
Germany, 14 L. & I. D. Jt. Co.
" 34 M. Dk. Co
France, 12 Prop. Hay's Wf.
" 12 Bennett S. S. Co.
Belgium, 50 T. H. Lee
Holland, 60 A. E. Piggott
" 6 A. G. Robinson & Co.
Germany, 170 H. Lambert
U. States, 34 Armour & Co.
Italy, 80 Brown & Co.

Glue Stock—
Germany, 396 bls. W. Balchin, Ld.
Queensland, 43 T. J. & T. Powell
N. Zealand, 8 "
Belgium, 100 J. E. Kitton

Glycerine—
France, £20 W. Balchin, Ld.
" 340 H. Hill & Sons
Germany, 50 R. W. Greeff & Co.
Brisbane, 360 H. Hill & Sons
France, 35 J. L. Lyon & Co.
Holland, 450 J. Barber & Co.

Guano—
Germany, 31 t. Phillips & Graves

Infusorial Earth—
Germany, £91 Snowdon, Sons & Co
" 25 Argo S. S Co.

Lead Acetate—
France, £120 Beresford & Co

Manganese—
Germany, 5 t. R. Ulrich

Manure—
Brisbane, 2 t. A. & W. Nesbitt

Methyl Alcohol—
Germany, 1,200 galls. Tingle, Jacobs & Co.
U. States, 100 T. Jones & Co.
" 25 dms. H. Wallace & Co

Mica—
U. States, £25 Knight & Morris
Canada, 13 "
U. States, 145 W. M. Smith & Sons
Germany, 4 Craven & Co.

Molasses—
U. States, 6 brls. 35 cwt. Barrett, Tagant & Co.
" 60 350 Ohlemschlager Brs.
" 7,000 11,800 J. R. Francis & Co
Holland, 750 cks. 4,040 "
U. States, 750 brls. 3,560 A. E. Booth
" 250 1,340 Falkenberg & Hesse
" 438 2,457 J. W. Cook & Co
" 25 149 Wilson & Furness Co.
" 250 J. Forsey

Ochre—
France, 61 cks. W. Harrison & Co.
Holland, 25 pks. Phillipps & Graves
France, 9 Sollas & Sons
Germany, 2 cks. Brit. Anti-Fouling Composition and Paint Co

Paraffin Wax—
U. States, 50 cs. Anglo-Am. Oil Co.
" 70 bgs. Thames S. T. & L Co.

Pearl Ash—
Holland, 210 c. F. W. Berk & Co.

Phosphate Rock—
Belgium, 250 t. Anglo-Con. Guano Wks.
France, 100 W. E. Cole
Holland, 240 Lawes Chemical Manure Co.
France 165 A. Hunter & Co.
Canada, 117 Pickford & Winkfield

Pitch—
Germany, 29 brls. Sirchas, Price, & Co.
Belgium, 6 bgs. Sir C. Price & Co.
Holland, 30 brls. H. Hill & Sons

Plumbago—
Ceylon, 284 brls. Marshall & French
" 680 Thredder, Son & Co.
U. States, 11 cs 2 hds. Lunham & Moore

Potassium Carbonate—
Canada, 156 c. Charles & Fut

Potassium Oxalate—
Holland, 10 pks. R. W. Greef & Co

Potassium Oxychloride—
Sweden, 100 pks. G. Boor & Co.

Potassium Permanganate—
Germany, 10 pks. R. W. Greef & Co.

Potassium Sulphate—
Germany, 14 pks. H. Lambert
" 500 Bessler, Waechter & Co.

Rosin—
U. States, 2,709 brls. Prod. Brokers' Co.
" 500 J. Knight & Sons
" 700 T. Nickels & Co.
Germany, 16 cks. H. Lambert

Rosin Oil—
France, 250 brls. C. Price & Co.
" 60 Barratt, Tagant, & Co.

Salicyl c Acid—
Germany, 35 pks. Butler's Wf., Ld.

Saltpetre—
E. Indies 1,168 bgs Lucas & Spencer's Wf.
Germany, 350 S. E. Rly Co.
" 73 cks. J. Hall & Son, Ld.

Soap—
U. States, £86 Lunham & Moore
France, 21 City Coml. Wf., Ld.
Belgium, 48 D. C. Thomas & Sons
Holland, 52 Phillipps & Graves
Spain, 2 Nicholson's Whvs., Ld.
France, 10 Mory & Co.
" 240 Vokins & Co., Ld.
" 8 Fuerst Brs.
" 292 Lon & Til. Ltge. C. & D. Co.
Belgium, 3 T. H. Lee
U. States, 1,258 W. Dixon
France, 20 Major & Field
Italy, 20 H. Johnson & Sons

Soda—
U. States, 2 500 c. F. W. Berk & Co., Ld.

Soda Crystals—
Belgium. 30 c. Leach & Co.

Sodium Bisulphite—
Holland. 2 dms. H. Lorenz

Sodium Hyposulphite—
Holland, 140 c. R. W. Greeff & Co.

Sodium Prussiate—
Belgium, 16 pks. Blagden, Waugh, & Co.

Sodium Sulphide—
Holland, 18 cks. H. Wallace & Co.
Germany, £28 "

Starch—
Holland, 97 pks. Phillipps & Graves
U. States, 20 Beck & Pollitzer
" 100 C. Tennant, Sons, & Co.
Germany, 40 Phillipps & Graves
Belgium, 540 F. Claydon & Co.
" 100 T. Ronaldson & Co.
France 200 Prprs. Dowgate Dk.
Holland, 40 Hernu, Peron, & Co.
Germany, 1 Butler's Wf., Ld.
Belgium, 110 Leach & Co.
" 270 T. H. Lee
" 260 Becker & Wagner
" 936 E. & T. Pink
" 60 Taylor Brs.
" 80 C. Tennant, Sons, & Co.
France, 495 E. & T. Pink
" 495 W. E. Cole
Germany, 1,000 Horne & Co.
Holland, 2,670 Little & Johnston
" 610 A. Starck

Stearine—
Holland, 51 bls. J. Owen
France, 100 bgs. Bennett S. S. Co.
Belgium, 16 Sawer, Sons, & Co.
" 443 H. Hill & Sons

Talc—
France, £60 Brasch & Rothenstein

Tar—
Sweden, 731 cks. Linck, Moeller, & Co

Tar Oil—
Holland, 66 cks. Blagden, Waugh, & Co.

Tartaric Acid—
Holland, 32 pks. Kirkpatrick, Barr, & Co.

Turpentine—
U. States, 1,484 brls. Prod. Broker's Co.
N. Russia, 53 A. Bertram & Co.
" 53 F. & S. Chiesman & Co.
S'vannah, 7,557 Nicholl & Knight

Ultramarine—
Germany, 4 pks. J. Kitchin, Ld.
Belgium, 4 Taylor Brs.
Holland, 9 Phillipps & Graves
" 16 W. Harrison & Co.
Belgium, 20 H. Khnstamn

Varnish—
U. States, 28 pks. L & I D. Jt. Co.
Germany, 1 "
U. States, 39 J. R. Francis & Co.
" 2 E Packard & Co
" 5 A. E. Piggott

White Lead—
Germany, 39 pks. Perkins & Homer
" 26 H. B. Alder & Co.
" 21 J. Graves
Belgium, 17 J. L. Lyon & Co.
" 2 J. E Kitton
" 52 Robertson, Selley, & Co.
Holland, 52 Wilkinson, Heywood, & Co.

Wood Pulp—
Sweden, 400 pks. Alsing & Co.
" 400 A. H. Kelp
Norway, 600 W. E. Bott & Co
" 400 Tough & Henderson
Germany, 1,100 E. J. & W. Goldsmith
Sweden, 250 Tough & Henderson
" 82 W. G. Taylor & Co., Ld.
" 500 London Paper Mills Co
Holland, 16 Henderson, Craig, & Co.
" 250 Robinson, Roberts, & Co.
Germany, 25 T. H. Lee
Sweden, 16 Phillipps & Graves
Germany, 900 M. Dk. Co.
Sweden, 212 "
U. States, 962 W. D. Cork
" 105 Thames S. T. & L. Co., Ld.
Canada, 4,310 Henderson, Craig, & Co.

Zinc Oxide—
Germany, 100 brls. M. Ashby, Ld.
Holland, 130 "
U. States, 100 "

LIVERPOOL.

Week ending September 15th.

Acids—
Antwerp, 1 cs.

Albumen—
Hamburg, 1 cs.

Ammonia—
Antwerp, 16 cs.

Asbestos—
Genoa, 67 pks.

Barytes—
Rotterdam, 37 cks.
Antwerp, 50 bgs.

Bitumen—
Alexandria, 100 cs.

Bone Ash—
San Nicolas, 71 bgs. R. M. Hudson

Bones—
San Nicolas, 64 bgs. R. M. Hudson
Cadiz, 162 sks. Strumpel & Brown

Boracic Acid—
Hamburg, 8 cks.

Caoutchouc—
Valparaiso, 97 bls. J. H. Schroder & Co.

Castor Oil—
Leghorn, 20 cs.

Chemicals *(otherwise undescribed)*
Rotterdam, 2 cks.

Colours—
Antwerp, 16 cks. 147 cs.
Amsterdam, 1
Rotterdam, 124
Ghent, 11

Cream of Tartar—
Barcelona, 2 pks. J. Bunsen & Co.
Bordeaux, 40 cks.
Barcelona, 2 pks.

Dried Blood—
Zarate, 377 bgs. J. Nelson & Sons, Ld
San Nicolas, 77 R. M. Hudson

Dyestuffs—
Argols
Oporto, 36 cks.
Extracts
Genoa, 107 brls. 10 cs.
Bordeaux, 100 cks.
Fiume, 340 J. Sutman
Ghent, 10 brls.
Fiume, 300 Oak Extract Co. Ld.
" 65
Logwood
Belize, 174 t. J. C. Plummer
Shumac
Palermo, 225 bgs. 26 bls.
Valonia
Symrna, 241 t. 337 bgs.
Patros 158 bgs. Papayanni & Jeremias

Farina—
Fiume, 150 bgs.
Hamburg, 72

Glucose—
New York, 50 brls. T. M. Duche & Sons
Boston, 1,109

Glue—
Rotterdam, 300 bgs. 1 ck.
New York, 6 brls. Oxford University Press
Rouen, 24 cks. Co-op. W'sale Society, Ld.
Antwerp, 5
Fiume, 202 bgs.

Iodine—
Valparaiso, 91 kgs. A. Gibbs & Sons

Limestone—
Antwerp, 2 cs.

Manure—
Hamburg. 4,500 bgs.

Mineral White—
Fiume, 150 bgs.

Molasses—
Vera Cruz, 4,950 brls. A. B. Booth

Paint—
Antwerp 10 cs.

Paraffin Scale—
New York, 258 brls Anglo-Am. Oil Co.

Phosphates—
Ghent. 400 t. J. T. Fletcher

Phosphorus—
Montreal, 50 cs.

Potash—
Rouen, 52 cks. Co-op. W'sale Society, Ld

Pyrites—
Genoa, 72 bgs.

Rosin Oil—
Rotterdam, 25 brls.

Salicylic Acid—
Hamburg, 6 cs.

Salt—
Hamburg, 10 cks

Saltpetre—
Hamburg, 12 cks. 50 kgs.

Soap—
Newport News, 330 brls.
Rotterdam, 22 cs.
New York, 100
Boston, 332 W. F. Geddes
Bari, 187

Soapstone—
Bordeaux, 300 bgs. Geo. G. Blackwell, Sons & Co.
Genoa 100 W. Harrison & Co.
" 300

Sodium Sulphide—
Boston, 40 brls. J. M. Zaffiroff

Starch—
Boston, 650 sks.
Hamburg, 14 cks. 752 cs.
Antwerp, 322
Rotterdam, 25

Stearine—
Bordeaux, 20 bgs.

Tallow—
Sydney, 244 cks. Co-op. W'sale Society, Ld.
" 356 Lever Brs., Ld.
" 49
Zarate, 236 pps. J. Nelson & Sons, Ld.
San Nicolas, 205 cks. R. M. Hudson

Tartaric Acid—
Rotterdam, 6 cks.

Ultramarine—
Rotterdam, 20 cks.

Varnish—
New York, 10 brls. W. A. Warren
" 24

White Lead—
Rotterdam, 44 cks.

Wood Pulp—
Rotterdam, 158 bls. 257 pks.
Montreal, 570 A. Rice & Co.

Zinc Oxide—
Rotterdam, 40 cks. J. Mathews & Co.
Hamburg, 25
Antwerp, 148 brls.

MANCHESTER.

Week ending September 17th.

Acetate of Lime—
New York, 88 bgs.
Rouen, 154

Alizarine—
Rotterdam, 9 cks. 41 brls.

Alumina Sulphate—
Rotterdam, 38 cks.

Ammonia—
Rotterdam. 55 cyldrs.

Antimony Bifluoride—
Hamburg, 4 cks.

Antimony Salts—
Rotterdam, 10 cks.

Asbestos—
Quebec, 1,400 bgs.

Barytes—
Antwerp, 118 pks. J. T. Fletcher & Co.
Hamburg, 22 cks.
Rotterdam, 195 bgs. 9 cks.

Caustic Potash—
Hamburg, 20 cks.

Colours—
Antwerp, 13 cks.
Rotterdam, 44 25 cs. 70 pks.

Dried Blood—
Bordeaux, 20 cs. J. & P. Hutchison

Farina—
Hamburg, 50 bgs.

Gelatine—
Rotterdam, 10 cs.

Glucose—
Montreal, 200 brls.
New York, 100
Quebec, 250 bgs.
Rotterdam, 4 cks.

Glue—
Antwerp, 6 cks.
Hamburg, 1 bg.
Rotterdam, 30
Rouen, 80 cs. 14 cks. 22 bls.
Treport, 10

Indigo—
Rotterdam, 3 cks.

Lead Acetate—
Rotterdam, 18 cs.

Limestone—
Antwerp, 17 cs. 1 crte.

Litharge—
Rotterdam, 15 cks.

Mineral White—
Bordeaux, 100 bgs. G. G. Blackwell, Sons, & Co.
" 180 J. & P. Hutchison

Naphthol—
Rotterdam, 1 cs.

Ochre—
Rotterdam, 14 cks. 60 bgs.

Oxalic Acid—
Rotterdam, 5 cks.

Phosphorus—
New York, 30 cs.

Potash—
Hamburg, 34 cks.
Rotterdam, 100 bgs.
Treport, 4 cks.

Potassium Sulphate—
Rotterdam, 15 cks.
Rouen, 3

Soap—
Hamburg, 2 cs.
New York, 1,020 bxs.

Soda—
Treport, 40 bgs.

Sodium Oxide—
Hamburg, 2 cks.

Starch—
Antwerp, 450 cs.
Hamburg, 250
Montreal, 700 bgs.
New York 700
Quebec, 2 600
Rotterdam, 322

Stearine—
Rotterdam, 26 bls.

Sulphuric Acid—
Rotterdam, 10 cks. 20 dms.

Tartar Emetic—
Hamburg, 16 cks.

Tartaric Acid—
Rotterdam, 20 cks.

Ultramarine—
Hamburg, 23 cks. 8 cs.

Varnish—
Antwerp, 10 cs.

Wood Pulp—
Montreal, 301 bls.
Quebec, 4,800
Rotterdam, 50

Zinc Oxide—
Antwerp, 25 brls.
Hamburg, 25 cks.
Rotterdam, 20

Zinc White—
Rotterdam, 5 cks.

HULL.

Week ending September 17th.

Acids—
Bari, 21 cks. Wilson, Sons, & Co., Ld.

Antimony—
Dunkirk, 1 cs. Wilson, Sons, & Co., Ld.

Barytes—
Antwerp, 134 bgs. Wilson, Sons. & Co., Ld.
" 72 cks. H. F. Pudsey
Bremen, 86
Mowe, 28

Castor Oil—
Venice, 7 cs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Antwerp, 80 cks Wilson, Sons, & Co., Ld
Dunkirk, 37, 35 pks., 20 dms. "
Hamburg, 1 ck.

Colours—
Antwerp, 17 cks. Wilson,
24 pks. Sons, & Co., Ld.
Bremen, 2 cs. J. Pyefinch & Co.
Hamburg, 40 cks. Sissons Brs. & Co., Ld.
Rotterdam, 5 pks., 1 cs. Wilson,
9 cks. Sons, & Co., Ld.
" 49 brls. Hull & Nether-
4 bxs. lands S. S. Co.

Copperas—
Bremen, 4 cks.

Dyestuffs—
Alizarine
Rotterdam, 89 brls., 41 pks., 5 bxs. Hull & Netherlands S. S. Co.
Aniline
Rotterdam, 22 brls. Hull & Netherlands S. S. Co.
Aniline Colours
Rotterdam, 4 bxs. Hull & Nether-
20 pks. lands S. S. Co.
Fustic
Hamburg, 82 bgs. Wilson, Sons, & Co., Ld.
Shumac
Palermo, 570 bgs. Wilson,
" 1,050 Sons, & Co., Ld.
Trieste, 39 bls. "

Farina—
Hamburg, 100 bgs. Wilson, Sons, & Co., Ld.

Harlingen, 5 bls. Hull & Netherlands S. S. Co.

Glue—
Hamburg, 2 cks. Wilson, Sons, & Co., Ld.
Rouen, 4 Rawson & Robinson

Glue Stock—
Bari, 32 bls. Wilson, Sons, & Co., Ld.

Naphthol—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Ochre—
Rouen, 40 cks. Rawson & Robinson

Paint—
Hamburg, 9 pks. Wilson, Sons, & Co., Ld.

Phosphates—
Ghent, 160 t. Wilson, Sons, & Co., Ld.

Pitch—
Archangel, 800 cks.

Potash—
Hamburg, 21 dms. Bailey & Leetham, Ld.

Pumice Stone—
Messina, 147 pks. Wilson, Sons, & Co., Ld.

Resorcin—
Rotterdam, 1 brl. Hull & Netherlands S. S. Co

Rosin—
Brunswick, 5,648 brls. J. M. Hamilton & Co.
Savannah, 3,800 cks.

Saltpetre—
Hamburg, 14 pks. Wilson, Sons, & Co., Ld.

Soap—
Bari, 33 cs. Wilson, Sons, & Co., Ld.

Soda—
Ghent, 200 bgs. Wilson, Sons, & Co., Ld.

Sodium Acetate—
Rouen, 10 cks. Rawson & Robinson

Starch—
Amsterdam, 100 cs. Hull & Netherlands S. S. Co.
Antwerp, 140 Bailey & Leetham. Ld.
" 300 Wilson, Sons, & Co., Ld.
Bremen, 1,217 Veltmann & Co.
Ghent, 230 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 77 bgs. Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 276 bgs. Wilson, Sons, & Co., Ld.
" 609 pks.

Tallow—
Dunkirk, 59 cks. Wilson, Sons, & Co., Ld.

Tar—
Archangel, 450 brls.
Stockholm, 100 Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 12 cks. Hull & Netherlands S. S. Co.

Ultramarine—
Bremen, 2 cks.
Rotterdam, 18 Hull & Netherlands S. S. Co.

White Lead—
Amsterdam, 67 cks. Hull & Netherlands S. S. Co.
Rotterdam, 98 "

Wolfram—
Rotterdam, 2 cs. Hull & Netherlands S. S. Co.

Wood Pulp—
Abo, 64 bls.
Christiania, 4,038 Wilson, Sons, & Co., Ld.
Drontheim, 300 "
Gothenburg, 642 "
Hango, 16 J. Good & Sons

Zinc White—
Rotterdam, 15 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending September 22nd.

Acetic Acid—
Rotterdam, 8 cks. J. Rankine & Son

Aniline Salts—
Rotterdam, 25 cks. J. Rankine & Son

Barium Sulphate—
Antwerp, 200 bgs. 85 cks.

Barytes—
Hamburg, 50 bgs.
Rotterdam, 138 cks. 7 pks. J. Rankine & Son

Bleaching Powder—
Rotterdam, 44 cks. J. Rankine & Son

Bone Meal—
Bombay, 2,133 bgs.

Castor Oil—
Marseilles, 307 brls. 10 cs.

Chemicals (*otherwise undescribed*)
Amsterdam, 1 cs.
Hamburg, 10

Chrome Alum—
Rotterdam, 9 brls. J. Rankine & Son

Colours—
Rotterdam, 1 ck. 106 pks. J. Rankine & Son

Copper Oxide—
Antwerp, 1 cs.

Cream of Tartar—
Bordeaux, 1 ck.

Dyestuffs—
Alizarine
Rotterdam, 22 cks. 28 brls. J. Rankine & Son
Aniline
Amsterdam, 1 ck. J. Rankine & Son
Rotterdam, 66 brls. 16 bxs. 20 cks. "
Aniline Colours
Amsterdam, 4 cks.
Hamburg, 2 cs.
Extracts
Antwerp, 2 cks.
New York, 50 cs.
Rouen, 3
Shumac
Palermo, 2,450 bgs.

Farina—
Hamburg, 100 bgs.

Glucose—
Boston, 50 brls.
New York, 400

Glue—
Hamburg, 20 bgs.
Rotterdam, 20 J. Rankine & Son

Glycerine—
Nantes, 20 cks.

Indigo—
Rotterdam, 15 chts. 10 brls. J. Rankine & Son

Molasses—
New York, 300 brls.

Ochre—
New York, 70 pks.
Rouen, 20 cks.

Paint—
New York, 16 dms.

Painters' Colours—
Antwerp, 1 ck.

Pitch—
Archangel, 650 cks. Young, Falconer, & Co.

Potash—
Hamburg, 41 dms.
Rotterdam 73 cks. J. Rankine & Son

Pumice Stone—
Messina, 80 bgs. 33 cs. 45 brls.

Rosin—
New York, 917 brls.
Savannah, 3,134
——, 2,250

Soap—
Marseilles, 77 bxs.

Soap Lye—
Marseilles, 40 dms.

Sodium Acetate—
Rouen, 18 cks.

Starch—
Antwerp, 1 ck. 60 cs.

Stearine—
New York, 5 tcs.

Sulphur—
Catania, 60 bgs. 20 cks.

Tar—
Archangel, 1,747 cks. Young, Falconer, & Co

Tar'ar—
Messina. 2 cks.

Tin Oxide—
Rotterdam, 1 ck. J Rankine & Son

Turpentine—
Savannah, 1,650 brls.

Varnish—
New York, 100 brls.

White Lead—
Rotterdam, 72 pks. J. Rankine & Son

Wood Pulp—
New York, 11 cs.
Gothenburg, 47 bls.
Boston, 180
Hamburg, 203
Christiania, 190 2,591 pcs.

Zinc Oxide—
New York, 150 brls.

Zinc Sulphate—
Rotterdam, 5 brls. J. Rankine & Son

Zinc White—
Rotterdam, 55 cks. 35 pks. J. Rankine & Son

TYNE.

Week ending September 17th.

Barytes—
Antwerp, 500 bgs. Tyne S. S. Co.
Rotterdam, 41 cks. "

Colours—
Antwerp, 4 cks. Tyne S. S. Co.
Ghent, 2 brls. "

Glue—
Hamburg, 20 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 17 crts. Tyne S. S. Co.

Magnesia—
Hamburg, 4 cks. Tyne S. S. Co.

Phosphates—
Dunkirk, 197 t.

Starch—
Rotterdam, 146 cs. Tyne S. S. Co.

Tar—
Archangel, 1,566 brls.

Ultramarine—
Rotterdam, 1 cs. Tyne S. S. Co.

White Lead—
Antwerp, 34 cks. Tyne S. S. Co.
Rotterdam, 12 "

Wood Pulp—
Christiania, 1,680 bls. 30 cs.

Zinc Oxide—
Antwerp, 45 brls. Tyne S. S. Co.
Rotterdam, 20 cks. "

GOOLE.

Week ending September 14th.

Alizarine—
Rotterdam, 40 cks.

Alkali—
Calais, 16 cks.

Alum—
Rotterdam, 21 bgs.

Aniline—
Rotterdam, 348 cks. 89 cs.

Barytes—
Antwerp, 33 cks.

Calcium Carbonate—
Antwerp, 146 bgs.

Caoutchouc—
Boulogne, 2 cks.

Chemicals (*otherwise undescribed*)
Hamburg, 1 cs.

Colours—
Hamburg, 20 cks. 1 cs.

Dyes—
Amsterdam, 1 ck.

Dyestuffs (*otherwise undescribed*)
Amsterdam, 1 ck. 1 cs.
Boulogne, 2 9
Rotterdam, 1

Extracts—
Rotterdam, 23 cks.

Farina—
Delfszyhl, 100 bgs.

Glue—
Boulogne, 5 cks. 14 bs.
Hamburg, 2

Lead Acetate—
Hamburg, 6 cks.

Ochre—
Calais, 36 cks.

Phosphates—
Ghent, 800 bgs

Potash—
Calais, 16 dms.
Dunkirk, 15 cks. 10

Salt—
Hamburg, 100 t.

Saltpetre—
Rotterdam, 100 bgs.

Size—
Hamburg, 10 cks.

Starch—
Ghent, 174 bxs.

Waste Salt—
Hamburg, 148 cks.

GRIMSBY.

Week ending September 17th.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 1
Rotterdam, 1 bskt.

Chemicals (*otherwise undescribed*)
Antwerp, 2 cks. 6 cs.
Hamburg, 1
Rotterdam, 18

Colours—
Antwerp, 10 cks. 100 pks.
Hamburg, 12 2 cs. 95
Rotterdam, 17 1

Dyestuffs (*otherwise undescribed*)
Dieppe, 3 cks.

Manure—
Rotterdam, 20 bgs.

Size—
Antwerp, 1 ck.
Rotterdam, 10 cs.

Starch—
Antwerp, 10 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 21st.

Acids—
Auckland, 12 cs. £12

Alkali—
E. London, 6 c. £6
Sydney, 6 12

Alum—
Calcutta, 40 t. 6 c. £98

Ammonia—
B. Ayres, 9 c. £28

Melbourne, 20 cs.
Calcutta, 4
Durban, 10

drous Ammonia—
goon, 3 c. £32

onium Carbonate—
yres, 3 cs. £14
ourne, 20 30
utta, 9 16
bama, 2 t. 47
, 1 25

onium Chloride—
ica, 2 t. 6 c. £70
ourne, 1 4 21

onium Sulphate—
burg, 50 t. £500
mbo 20 3 c. 443
adoes, 25 2 263

ic—
etersburg, 5 t. £130

hing Powder—
edin, 4 cs. £16

x—
land, 1 t. 2 c. £19
nsville, 20 kgs. 14

onic Acid Gas—
nel Is., 59 tubes £22

lic Soda—
Elizabeth, 8 cs. £5
nsville, 2 t 1 c. 11
kay, 6 6
on, 10 cs. 10
idad, 2 drs. 6

icals *(otherwise undescribed)*
Video, 1 cs. 14
yres 1 17
kland, 4 25 pks. 89
tsin, 11 15
ey, 7 cks. 1 12 81
werp, 10 kgs. 57
sels, 5 4 61
en, 1 2 30
erdam, 12 69
ourne. 4 cks. 7 28
kholm, 17 31
burg, { 4 / 6 kgs. } 149
, 2 45
ane, 48 (pt.) 2.5
treal, 16 dms. 26
fax, 15 hhds. 39
hama, 3 14
aide, 14 pks 26
lizabeth, 1 63
halmers, 3 14
as, 22 38
, 64 (pt.) 110
irk, 19 dms. 76
ldorf, 41 cks. 63
Town, 6 39
gne, 1 10
din, 3 kgs. 12
York, 23 pks. 72

Acid—
hai, 1 c £7
tersburg, 1 7
t, 1 cs. 5
y, 24 kgs 132
izabeth, 2 c. 13
n, 2 13
, 5 33
ide, 10 64
, 2 13

roducts—
line
lin, 2 cs. 2 pks. £26
y, 1 ck. 1 25

hracene
ldorf, 267 cks. £8 9

zol
rt, 31 cks. £8 8
gne, 48 162

bolic Acid
y, 1 cs. £5
, 50 cks. 149
izabeth, 50 dms. 43
elphia, 49 217
church, 40 pks. (pt.) 14

osote
c, 47 000 galls. £246

osote Salts
elphia, 642 bgs. £177

htha
nd, 40 dms. £10
urne, 25 cs. 46

hthaline
4 cks. £16
dam, 100 bgs. 55

h
rp, 1,058 t. £1,272
k, 105 105
on, 2 cks. 5
idria, 202 brls. 55
ldorf, 56 120
al, 250 55

Pyridine
Cologne, 12 cks. £135

Tar
Pt. Elizabeth, 110 dms. £9
Singapore, 40 7
Durban, 50 6
Hamburg, 150 brls 65
Rangoon, 2 rnlts. 5
Melbourne, 50 6
Teneriffe, 6 5
Stettin, 100 49

Tar Oil
Marseilles, 8 cks. £12

Tar and Pitch
Adelaide, 970 pks. £156

Copper Sulphate—
Melbourne, 5 t. £8
Paris, 15 4 c. 235
Colombo, 11 9
Rotterdam, 4 8 72
Riga, 5 11 87

Cream of Tartar—
Pt. Elizabeth, 3 c. £12
Hobart, 5 24

Cyanogen Bromide—
Fremantle, 1 t. £330

Disinfectants—
Shanghai, 3 cks. £15
Brisbane, 12 dms. 11
Bombay, 5 20
Cape Town, 6 cs. 67 pks. 65
Jamaica, 6 30
Sydney, 6 19
Philadelphia, 29 57

Glycerin—
Hamburg, 19 t. 18 c. £80
New York, 10 5 230
Stockholm, 1 40

Hydrochloric Acid—
Bombay, 20 cs. £14

Manure—
Dunkirk, 240 t. £1,258
Rouen, 50 143
Malaga, 300 2,480
Rochefort, 129 740
Demerara 20 154

Phosphorus—
Wellington, 12 c. £106
Dunedin, 10 cs. 85
Oporto, 3 25

Phosphorus (Amorph)—
Oporto, 3 cs. £33

Potash Salts—
Auckland, 175 cs. £1,100

Potassium Bichromate—
Danzig. 11 c. £16
Dunedin, 5 cks. 77
Rotterdam, 1 t. 6 44
Piræus 1 5 43

Potassium Chloride—
Tellicherry, 50 t. £487
Calicut, 20 7 c. 197

Potassium Cyanide—
Fremantle, 12 t. 3 c. £1,163
Auckland, 6 6 6
Melbourne, 30 cs. 3 8
Durban, 20 205
Pt. Elizabeth, 6 t. 636
Penang, 1 116
Delagoa Bay. 123 1,328

Potassium Prussiate—
Yokohama, 1 t. 5 c. £79

Salt Cake—
Melbourne, 25 t. 17 c. £63
Oldenburgh, 130 60

Saltpetre—
Melbourne, 3 t. 3 c. £67
Bahia, 2 2 44
Rio de Janeiro, 5 6 111
Montreal, 5 95
Amsterdam, 2 40
Hamburg, 2 45

Sheep Dip—
E. London, 100 cs £100
Durban, 12 62
Pt. Elizabeth, 5 t. 15 c. 210

Soda—
Trinidad, 1 t. £4

Sodium Bicarbonate—
Normanton, 16 c £10
Auckland, 15 kgs. 6

Sodium Bichromate—
Hamburg, 21. 13 c. £80

Sodium Nitrate—
Hiogo, 23 t. 1 c. £198
Dunedin, 1 2 10

Sulphur—
Colombo, 1 t. £8

Sulphuric Acid—
Durban, 10 cs. £18
Tellicherry, 15 13

Tartaric Acid—
Bombay, 4 cs. £19
Hobart, 1 7
Pt. Elizabeth, 3 c. 21
Yokohama, 1 t. 5 141
Nelson, 3 18
Hamburg, 1 113
Dunedin, 4 23

LIVERPOOL.

Week ending September 21st.

Acetic Acid—
Barcelona, 1 t. 18 c. £10
Cartagena, 8 12
Copenhagen, 3 15 75

Alkali—
Fremantle, 5 t. £21
Corinto, 5 7 c. 23
La Guayra, 3 8 14
Barranquilla, 30 6 2 q. 122
Madeira, 1 11 2 7
Salonica, 5 1 2 21
Piræus, 10 13 44
Colamata, 6 8 26
Cavalla, 4 8 19
Calcutta, 4 7 13
Wellington, 5 2 21
Mauritius, 13 3

Alum—
Samarang, 12 t. £60
Quebec, 3 17 c. 2 c. 21
Calcutta, 30 151
San Francisco, 10 50
Santos, 1 6 6
Volo, 4 12 1 22
Rabat, 5 6 2 25
Rio de Janeiro, 4 19
Natal (Braz.), 3 13 3 18
Cape Town, 17 5
Madras, 8 5 45
Honolulu, 1 2 23
Mersyne, 5 22

Ammonium Carbonate—
Rotterdam 1 t. 7 c. £35
Venice, 2 11 68
Genoa, 25 kgs. 30
Trieste, 10 cks. 22
Odessa, 5 t. 4 117
Hamburg, 6 3 q. 10
Parahyba, 9 20
Naples, 18 98
Antwerp, 2 16 3 81
Hamburg, 1 7 1 38
Marseilles, 2 1 3
Copenhagen, 1 9 2 41

Ammonium Chloride—
Palermo, 10 c. £2
Barcelona, 1 t. 8 23
Trieste, 1 31
Messina, 6 13
Copenhagen, 6 8

Ammonium Sulphate—
Bilbao, 10 t. £65
Valencia, 50 450
Barcelona, 19 16 c. 202
Natal 1 12
St. Nazaire, 9 16 1 q. 108
Las Palmas, 35 3 387
Palermo, 5 51
Nantes 51 11 1 547

Antimony Sulphide—
Bahia, 4 c. £7

Arsenic—
San Juan, P.R., 1 c. 3 q. £6

Basic Slag—
Granville, 460 t. 300
Venice, 350 525

Bleaching Powder—
Baltimore, 167 cks.
Barcelona, 48
Calcutta, 60 110 cs.
Carril, 6
Corfu, 20 brls.
Detroit, 46
Gothenberg, 28
Lisbon, 40
Montreal, 41
Naples, 21
Newport News, 125
New York, 175
Odessa, 19
Philadelphia, 231
Piræus, 25
Rio de Janeiro, 5

Borax—
Natal, 17 c. 3 q. £13
Antwerp 3 t. 4 3 47
La Louviere, 3 15 2 54
Maestricht, 18 11 268
Rotterdam 15 11 3 327
Valparaiso, 4 8
Copenhagen, 5 11 78

Calcium Carbide—
B. Ayres, 10 c. £10

Calcium Chloride—
New York, 17 t. 4 c. £39
Boston, 2 13 6
Odessa, 30 2 63
Adelaide, 12 5 27
Melbourne, 5 2 12
Colombo, 2 4 5

Carbolic Acid—
Accra, 1 cs. £6
Fiume, 10 cks. 33
Yokohama, 4 t. 18 c. q. 246
Rotterdam, 13 11
St. Louis, 4 2 1 248
Hamburg, 6 8 1 393
New York, 14 17 350
Wellington, N.Z. 4 2 24
Odessa, 9 3 37

Caustic Potash—
Sydney, 3 t. 1 c. £83
New York, 17 9 436

Caustic Soda—
Alexandria, 15 dms.
Amsterdam, 137
Ancona, 15
Bahia, 105
Barcelona, 114 315 pks
Bilbao, 273 30 brls
Boston, 80
Brussels, 17
Cartagena, 40
Darlington, 50
Dunedin, 35
Fiume, 15
Galatz, 543
Genoa, 285
Hamburg, 83
Havana, 60
Hiogo, 821
Hong Kong, 96
Ibrail, 25
Kingston, Jam., 12
Leghorn, 50
Lerdo, 150
Lisbon, 50
Malaga, 75
Melbourne, 61 15 crts.
Montery. 60
Montreal, 20
Nantes, 42
Naples, 59
N. Orleans, 61 bxs.
New York, 150
Odessa, 725
Pedang, 150
Para 30
Parahyba Cab., 20
Penang, 30
Pernambuco, 80
Progresso, 2
Quebec 125
Rio de Janeiro, 183
Rotterdam, 89 20 kgs.
St. John's 11
Santos, 145
Sao Paulo, 22
Singapore, 10
Sourabaya, 25
Sterling. 50
Stockholm 10
Sydney, 110 2
Tampico, 150
Tarragona, 20 30 cks
Torrijor, 30 bgs.
Valencia, 15
Valparaiso, 50
Vera Cruz, 71
Vigo, 19
Winnipeg, 35

Chemicals *(otherwise undescribed)*
Sydney, 2 t. 10 c. £80
M. Video, 21 5 59
Calcutta, qty. 266
Madras, 10 t. 1 9 12
Natal, 4 5
Leghorn, 1 14
Malta, 16 11
Rotterdam, 12 14 179
Stettin, 1 14 1 q. 32
New York, 16 11 5 54
Philadelphia, 26 8 2 724
Odessa, 4 10 114
Barcelona, 4 106

China Clay—
Baltimore, 150 cks.
Bombay, 20
Boston, 580
Georgetown, 100
Montreal, 200
Pernambuco, 40
Philadelphia, 100 783 bgs.
Tampico, 14
Toronto, 30
Vera Cruz, 50

Citric Acid—
Melbourne, 2 t. 1 c. £15
Montreal, 11 62
Natal, 1 8
Coal Products—
Aniline Oil
Barcelona, 33 cks.
Boston, 7 dms.
Genoa, 6
Aniline Salts
Athens, 5 cks.
Boston, 22 cs.
New York, 8
Dyes
Boston, 6 cks. 11 kgs.
Naphthaline
New York, 10 cks.
Pitch
Rouen, 2 cks.
Tar
Bordeaux, 100 cks.
Brass, 8 brls.
Colombo, 18 c.
Manila, 100 dms.
Cobalt Oxide—
Antwerp, 1 cs. £50
Copperas—
Tripoli, 2 t. 11 c. 3 q. £8
Calcutta, 27 1 2 54
Vera Cruz, 3 5 6
Limassol, 16 1
Copper Sulphate—
Melbourne, 7 t. 10 c. £126
Palermo, 4 15 1 q. 78
Sourabaya, 5 17 3 96
Calcutta, 1 5 26
Galatz, 2 33
Havre, 9 8
Brisbane, 1 16
Antwerp, 4 18 3 76
Smyrna, 6 1 5
Catania, 9 1 2 145
Pernambuco, 10 8 8
Christiania, 6 5
Bordeaux, 9 16 3 1 9
Charlotte Town, 9 2 8
Alexandria, 1 2 18
Kentville, U.S. 9 8
Disinfectants—
E. London, 5 t. 10 c. 3 c. £20
Calcutta, 2 9 70
Santos, 6 10
Dyestuffs—
Aniline Colours
Bombay, 5 cs.
Boston, 5 kgs.
New York, 5 24 cks.
Extracts
Montreal, 10 cks.
New York, 100
Logwood
Alexandria, 100 bls.
Carnwall, 10 cks.
Valonia
Adelaide, 276 bgs.
Dyestuffs (*otherwise unaescribed*)
Barcelona, 6 cks.
Moncton, 120 bgs.
Glycerine—
Valparaiso, 50 galls. £16
Boston, 5 t. 240
Yokohama, 1 54
Calcutta, 1 44
Iron Oxide—
New York, 5 c. £4
Magnesia—
Havre, 2 cs.
Tampico, 6
Vera Cruz, 14
Magnesium Carbonate—
Vera Cruz, 14 c. £21
Magnesium Sulphate—
Lisbon, 43 bgs.
Quebec, 100
Manure—
Honfleur, 646 t. 5 c. aq. £2,630
Barcelona, 93 9 724
Malaga, 39 12 258
Oxalic Acid—
Boston, 7 t. 4 c. £200
Hiogo, 3 5 92
Barcelona, 5 11 152
Paint—
Alexandria, 40 kgs.
Antwerp, 6 cks. 5 dms.
Belize, 8 229 kgs.
Bonny, 2
Cadiz, 26
Colombo, 6
Constantinople, 62
Corunna,
Ferrol, 1
Hamburg, 4
Havana, 24
Hong Kong, 70
Johannesburg, 96
Kerasunde, 2
Las Palmas, 20
Manaos, 5
Maranham, 4
Mazatlan, 1 cs.
M. Video, 6
Old Calabar, 2 2
Para, 4
St. Lucia, 8
San Francisco, 5
Sierra Leone, 62 kgs.
Sydney, 80
Trieste, 10
Vera Cruz, 8
Painters' Colours—
Antofagasta, 49 cs.
Baltimore, 17 cks.
Brass, 20 pks.
Cartagena, 540
Corfu, 5 bls.
Galata, 5
Manila, 450 kgs.
Maranham, 20 brls.
New York, 5 cks. 2 bxs. 202 brls.
Para, 100 kgs. 96 brls. 35 pks.
Santos, 30 15 cs.
Syra, 10 cks.
Valparaiso, 100 kgs.
Vigo, 8 cks.
Paraffin Wax—
Barcelona, 20 bgs.
Cephalonia, 6
Leghorn, 200
Lisbon, 500
Patras, 60
Trieste, 7
Venice, 80
Phosphates—
Adelaide, 430 t. £850
Phosphorus—
B. Ayres, 2 t. 17 c. £331
Havana, 4 48
Kingston, 3 39
Monterey, 3 28
M. Video, 8 50
S. Luis Potosi, 3 28
Tampico, 8 74
Vera Cruz, 10 98
Potashes—
Wellington, 1 t. 5 c. £26
Potassium Bichromate—
Antwerp, 1 t. 1 c. 2 q. £35
Barcelona, 4 18 166
San Sebastian, 6 1 1 198
Vera Cruz, 2 84
Potassium Chlorate—
Antwerp, 1 t. £30
Bahia, 8 c. 17
Boston, 5 149
Copenhagen, 2 10 82
Genoa, 1 30
Ghent, 2 60
Gutujewski, 5 150
Havana, 8 13
Hiogo, 10 299
Monterey, 1 32
Naples, 1 30
New York, 10 300
Odessa, 51 4 1,545
Philadelphia, 13 15 413
Sao Paulo, 19 30
S. Luis Potosi, 15 24
Shanghai, 7 217
Sydney, 6 166
Vera Cruz. 2 64
Potassium Nitrate—
San Juan, P. R., 1 c. 3 q. £6
Potassium Oxalate—
Boston, 6 t. 15 c. £186
Potassium Prussiate—
Vera Cruz, 1 t. £63
Salt—
Adelaide, 30 t.
Algoa Bay, 104
Baltimore, 3,500 sks.
Benin, 5 c.
Belize, 22 6 / 500 bgs.
Bonny, 45 t. 17
Boston, 300 3,500
Brisbane, 250
Calcutta, 2,626 100 cs.
Cape Town, 50
Chicago, 50
Denmark, 210
Egwanga, 20
Gd. Bassa, 25
Hamburg, 205
Ibrail, 146
Kingston, 35
Lagos, 80
Leghorn, 100
Melbourne, 12
M. Video, 6
Montreal, 1,180
N. Orleans, 150
Newport News, 125
New York, 40 2,399
Pt. Natal, 100
Quebec, 500¼ bgs. 50
Reijkjavik, 90 t.
Rio de Janeiro, 50 cs.
Rio Grande, 50
San Francisco, 850
Salt Pond, 497 bgs.
Savannah, 348 t.
Sierra Leone, 2,500 bgs. 4,000
Sinoe, 150
Sydney, 50 t. 220
Wilmington, 988
Salt Cake—
Antwerp, 513 t. 8 c. £910
Hong Kong, 2 6
Saltpetre—
Maranham, 1 t. 15 c. 3 q. £38
Sheep Dip—
Algoa Bay, 1,101 dms. 10 c. £265
B. Ayres, 55 t. 2 782
M. Video, 450 dms. 105
N. Orleans, 1 t. 14 3 q. 56
Punta Arenas, 4 5 154
Wellington, 16 3 13
Soap—
Alexandria, 120 bxs.
Algoa Bay, 1,885 bgs. 37 bdls. / 108 bxs. 100 cs.
Amsterdam, 225
Antwerp, 45 200 brls.
Bale, 750
Barbadoes, 2,000
Bathurst, 169
Bombay, 750 24
Brussels, 411
B. Ayres, 3 21
Calais, 10
Calcutta, 2,049 pks.
Canaria, 918
Cape Mount, 20 bdls.
Cape Town, 1,692
Carbonear, 15
Cartagena, 25
Christiania, 365
Christchurch, 200 cs.
Conakry, 100
Cossack, 20
Curacao, 170
Dakar, 15
Delagoa Bay, 1,778
Drewin, 90
Fremantle, 20
Genoa, 120
Gibraltar, 360
Hamburg, 20
Jersey, 20
Johannesburg, 90
Karachi, 586
Kingston, Ja., 1,276
Lagos, 96
Ladysmith, 6
Landana, 300
Lanzarote, 105
Larnaca, 14
Las Palmas, 685
Limon, 600
Macassar, 500
Madras, 50
Malta, 30
Manaos, 1,583
Matadi, 684
Mauritius, 145
Melilla, 160
Menado, 1,000
Milan, 14
Newcastle, 1 tnk.
Old Calabar, 1
Oporto, 10
Para, 950 100 bdls.
Penang, 115
Philadelphia, 2 cks.
Pt. Natal, 850 10 cs.
Porto Novo, 200
Rangoon, 604 5
Rotterdam, 364
St. John's, 169 10
St. Lucia, 90
Savanilla, 5
Shanghai, 4,179
Sierra Leone, 93
Singapore, 1,006
Sinoe, 50
Sourabaya, 2,079
Sydney 16 6,000
Teneriffe, 698
Toronto, 500
Trinidad, 1,910
Valparaiso, 220 3 cks.
Vera Cruz, 1 cs.
Warri, 200
Zurich, 530
Soap Lye—
New York, 430 dms.
Rotterdam, 80
Soda—
Christiania, 144 bxs.
Tampico, 2 brls.
Soda Ash—
Barcelona, 14 cks.
Bilbao, 50 bgs.
Boston, 64 tcs. / 138
Brisbane, qty.
Calcutta, 150 kgs. 38
Catania, 120 bgs.
Chefoo, 5
Christchurch, 20 brls.
Copenhagen, 40
Dunedin, 3
E. London, 1,479 pks.
Fremantle, 40 cks.
Genoa, 930
Gothenburg, 153 pks.
Hamburg, 120 14 cks.
Hiogo, 281
Hong Kong, 53
Leghorn, 40 48
Libau, 5
Limon, 25
Madras, 10
Montreal, 80
New York, 35 tcs.
Oporto, 10
Philadelphia, 1,040 25
Piræus, 50 brls. 50
Puerto Cabello, 8
Rio de Janeiro, 85
Rotterdam, 100
Salonica, 100 60
San Francisco, 38
Sao Paulo, 15
Skien, 100
Smyrna, 100
Syra, 55
Toronto, 50
Trieste, 200
Venice, 300
Soda Crystals—
Alicante, 10 cks.
Amsterdam, 100 bgs.
Bahia, 10 brls.
Boston, 107 56
Calcutta, 33 kgs.
Constantinople, 40
Fremantle, 120
Galatz, 24
Huntsville, 107 bgs.
Messina, 20
Montreal, 775 pks.
Pernambuco, 30 kgs.
Quebec, 70
Rio de Janeiro, 4
Valparaiso, 100
Sodium Acetate—
Melbourne, 14 cks.
Sodium Arseniate—
Antwerp, 4 cks.
Sodium Bicarbonate—
Antwerp, 60 kgs. 6 cks. / 30 bgs.
Auckland, 200
Barcelona, 80
Bombay, 375 37
Brisbane, 50 10
Calcutta, 2,175
Cape Town, 73 pks.
Copenhagen, 16
Christiania, 12 dms.
Dunedin, 50
Dunkirk, 50
E. London, 40
Fremantle, 50
Genoa, 60 50
Gutujewski, 100
Hamburg, 20
Havana, 25
Hiogo, 10
Havre, 10
Hong Kong, 14 cks.
Karachi, 85
Konigsberg, 100
Malaga, 35
Melbourne, 187 20
Montreal, 105 pks.
Odessa, 100
Rio de Janeiro, 7
Rosario, 18 cks.
Rouen, 360 10
Salonica, 20
Santos, 50
Singapore, 5
Stettin 30
Sydney, 200

Trebizonde, 200
Venice, 100
Yokohama, 250

Sodium Carbonate—
Amsterdam, 100 brls.

Sodium Chlorate—
Boston, 200 kgs.
St. Petersburg, 100

Sodium Hyposulphite—
Tampico, 200 kgs.

Sodium Oxide—
Bordeaux, 5 cs.

Sodium Sulphite—
Leghorn, 39 brls.

Starch—
Barcelona, 8 bgs.

Sulphur—
Boston, 125 t. 5 c. £536
Brisbane, 1 7
Maranham, 10 5
New York, 1 20
Pernambuco, 2 5 3 q. 16
Trinidad. 6 28

Sulphuric Acid—
Sydney, 10 t. 1 c. £114

Superphosphates—
Adelaide, 1,300 t. £3,350
Bordeaux, 19 18 c. 45
Nantes, 146 9 221

Varnish—
Alexandria, 8 cs.
Antwerp, 14 cks.
Boston, 12
Corfu, 2
Curacao, 1
Doune, 2
Genoa, 6
Leghorn, 8
Madras, 5 dms.
Malta, 4
Naples, 3
Perth, 4
Sierra Leone, 5

White Lead—
Bahia, 30 kgs.
Belize, 45 dms.
Calcutta, 10 t.

Zinc Chloride—
Bombay, 10 t. £120

MANCHESTER.

Week ending September 21st.

Ammonium Sulphate—
France, 149 bgs.

Anido Salts—
Switzerland, 16 cks.

Aniline Colours—
Germany, 13 kgs.

Bleaching Powder—
Montreal, 125 cks.

Carbolic Acid—
France, 5 cks.

Coal Products—
Aniline Oil
Belgium, 7 dms.
France, 4
Germany, 20
Beta Naphthol
Belgium 2 brls.
Naphthol
Germany, 18 cks.
Naphthylamine
Germany, 28 cks.
Tar
Paris, 30 brls.

Disinfectants—
Bombay, 78 cks.

Extracts—
France, 8 cks.
Germany, 2

Glue—
Belgium, 4 cks.
Holland, 22

Paint—
Tripoli, Bar, 103 kgs. 1 cs.

Salt—
Germany. 220 t.
Gothenburg, 225

Soap—
Bombay, 4 cs.

Sodium Naphthionate—
Germany, 54 bgs.
Switzerland, 21 cks.

Tallow—
Bombay, 30 brls.

Whiting—
Bombay, 4 cks.

Wood Pulp—
Sydney, 16 bls.

Zinc Chloride—
Bombay, 13 cks.
Holland, 20

HULL.

Week ending September 17th.

Alkali—
Antwerp, 48 cks.
New York, 500 300 dms.

Ammonium Sulphate—
Leghorn, 90 bgs.
Rotterdam, 400
Rouen, 253

Chemicals *(otherwise undescribed)*
Amsterdam, 75 cks. 16 pks. 935 slbs.
Christiania, 14 2 cs. 7 pks.
Genoa, 2 2
Gothenburg, 4 5 5
Hamburg, 5 164
Libau, 20 dms.
Rotterdam, 4 44
St. Petersburg, 26 20 pks.
Stockholm, 2

Cottonseed Oil—
Amsterdam, 1,061 c.
Antwerp, 771
Christiansand, 21
Dunkirk, 505
Gothenburg, 107
Hamburg, 564
Harlingen, 173
Rouen, 175
Rotterdam, 681
Stettin, 20
Stockholm, 170

Creosote—
N. Orleans, 5,074 brls.

Creosote Salts—
Antwerp, 213 bgs.

Dyestuffs *(otherwise undes.)*—
New York, 13 cks.

Glue—
Hamburg, 11 bls.
New York, 47 cks.

Linseed Oil—
Amsterdam, 126 c.
Bordeaux, 36
Christiania, 321
Christiansand, 71
Drontheim, 169
Hamburg, 91
Stavanger, 42

Magnesia—
New York, 30 cks.

Manure—
Dunkirk, 1,700 bgs. 1,200 sks.
Riga, 1,549

Paint—
Antwerp, 2 cks.

Painters' Colours—
Amsterdam, 11 cks.
Christiania, 2
Copenhagen, 4 cs.
Ghent, 1 8 dms.
Gothenburg, 12
Hamburg, 1 5
Naples, 24
New York, 119
Rotterdam, 1 3
Rouen, 33
Stettin, 31 1

Pitch—
Antwerp, 92 t.
Christiania, 2 cks.

Plumbago—
New York, 320 brls.

Slag—
Christiania, 302 t.
Drontheim, 50

Slag Meal—
Riga, 3,000 bgs.

Soap—
Amsterdam, 225 cs.
Bergen, 60
Christiania, 55

Tallow—
Genoa, 58 cks.
Stockholm, 10

Tar—
Amsterdam, 5 cks.
Christiania, 3
Gothenburg, 3
Rotterdam, 4 brls.

Varnish—
Christiania, 2 cs.
Ghent, 1 ck.
Gothenburg, 1
Hamburg, 3
Marseilles, 3
Stettin, 24
Stockholm, 5

GLASGOW.

Week ending September 22nd.

Ammonium Sulphate—
Barcelona, 246 t. 3 c.
Hamburg, 101 5
Valencia, 131 11

Borax—
Canada, £39
Rotterdam, 140
Stockholm, 73

Caoutchouc—
Amsterdam, £23

Castor Oil—
Santos, £60

Caustic Soda—
Montreal, 14 14 c.
Seville, 16 16¾

Chemicals *(otherwise undescribed)*
Rotterdam, £50

Coal Products—
Pitch
Canada, 35 t.
Danzig, 257 2 c.
Tar
Rangoon, £86
Singapore, 79

Extracts—
Ghent, £14 12s.

Glue—
Rangoon, £49 7s.
Stockholm, 12 c.

Magnesium Sulphate—
Canada, £25 15s.

Manganese Oxide—
New York, £140

Paint—
Canada, £45

Painters' Colours—
Algoa Bay, £97
Cape Colony, 47
Natal, 363
Penang, £44 15s.
Rangoon, £43
Singapore, 131
Yokohama, 35

Paraffin Wax—
Bordeaux, £30
Danzig, 6 c.
Hiogo, 595
Italy, 1,669
Marseilles, 30
Skien, 30

Potassium Bichromate—
Italy, £167
Rotterdam, 34
Rouen, 216

Potassium Prussiate—
New York, £445

Soap—
Rangoon, 2 t.

Sodium Bichromate—
Italy, 4 t. 19 c.
Montreal, 2 8½
Rouen, 4 7¾

Sulphuric Acid—
Rangoon, £51

TYNE.

Week ending September 17th.

Alkali—
Amsterdam, 22 t. 12 c.
Rotterdam, 7 14

Ammonium Carbonate—
Aarhuus, 17 c.
St. Petersburg, 5

Antimony—
Rotterdam, 7 t.

Arsenic—
Gothenburg, 17 c.
Venice, 1 t.

Barium Binoxide—
Rouen, 24 t. 4 c.

Barium Carbonate—
Hamburg, 150 t.
St. Petersburg, 62

Barytes—
Antwerp, 2 t.

Bleaching Powder—
Aalborg, 5 t.
Amsterdam, 37 3 c.
Antwerp, 16 11
Bergen, 5
Copenhagen, 1 1
Drontheim, 10 2
Gothenburg, 15 4
Rotterdam, 14 10
St. Petersburg, 51 3

Caustic Soda—
Antwerp, 4 t. 18 c.
Bergen, 2 18
Copenhagen, 9 5
Gothenburg, 9 16
Hamburg, 21
Singapore, 10 3
St. Petersburg, 7 10
Venice, 29

Chemicals *(otherwise undescribed)*
Hamburg, 12 c.

Litharge—
Antwerp, 1 t. 3 c.
Hamburg, 1 18

Magnesia—
Antwerp, 11 c.
Hamburg, 3 q.

Magnesium Carbonate—
St. Petersburg, 1 t. 8 c

Ochre—
Hamburg, 1 t. 11 c.

Paint—
Antwerp, 9 c.
Gothenburg, 1
Hamburg, 2 t. 15

Pitch—
Rouen, 20 t.

Soda—
Amsterdam, 10 t.
Rotterdam, 20 4 c.

Soda Ash—
Ghent, 11 t. 2 c.
Gothenburg, 10 1
Venice, 4 2

Sodium Sulphate—
Copenhagen, 97 t.

Sulphur—
Gothenburg, 225 t.

Superphosphates—
Copenhagen, 250 t. 1 c.

Varnish—
Ergasteria, 1 c.

White Lead—
Copenhagen, 2 t. 6 c.

GOOLE.

Week ending September 14th.

Caoutchouc—
Ghent, 4 cs.

Chemicals *(otherwise undescribed)*
Amsterdam, 2 cks.
Ghent, 1

Coal Products *(otherwise undes.)*—
Amsterdam, 72 cks.
Antwerp, 101
Boulogne, 57 2 cs. 2 dms.
Ghent, 1
Rotterdam, 8 3 1

Logwood—
Hamburg, 10 t. 10 c.

Manure—
Ghent, 181 bgs.
Hamburg, 637

Pitch—
Antwerp, 250 t.

GRIMSBY.

Week ending September 17th.

Chemicals *(otherwise undescribed)*
Antwerp, 10 kgs.
Dieppe, 6 cs.
Malmo, 11 dms.

Coal Products *(otherwise undes.)*—
Dieppe, 228 cks. 1 kg.
Hamburg, 18 btls.

Colours—
Savanilla, 30 kgs.

Dyestuffs *(otherwise undescribed)*
Dieppe, 3 cks. 3 cs.

Manure—
Esbjerg, 5,091 bgs.

Nitric Acid—
Savanilla, 1 cs.

Painters' Colours—
Antwerp, 6 cs 6 pks
Hamburg, 1 ck. 1 60

PRICES CURRENT. WEDNESDAY, Sept. 28th, 1898

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	5	9	& 8/3
,, Glacial .. .. ,,		35	-
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	17	5	0
Alum (loose lump) .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B. .. .. ,,	0	0	2½
,, =24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	9	18	9
,, ,, (grey) Hull .. .. ,,	9	17	9
Aniline Oil (pure) .. .. per lb.	0	0	5¼
Aniline Salt ,, ... ,,	0	0	4⅝
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	0	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	15	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9½
,, 50/90 ,, ... ,,	0	0	9¾
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. per lb.	0	0	6¼
,, (liquid 95/97% .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	52	2	6
,, Sulphate .. .. ,,	17	5	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80 % .. .. ,,	29	0	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	2	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	16	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, *Nitrate*	20	0	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	5	0
,, ,, (grey) (ex ship .. .. ,,	7	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	1	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	10	0
Stearine .. .. per ton	25	0	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	22	10	0
,, ,, (Caustic Potash) 75/80 % .. ,,	18	0	0
,, Potash Hydrate Liquid 50 % .. .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	4½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	2	6
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	5	0
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	13	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton (1 ton lots)	7	17	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (1 ton lots)	7	12	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (1 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (1 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (1 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	5½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	6	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6¼
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	22	0	0
Tin Crystals .. .. per lb.	0	0	5½
,, English Ingots .. .. per ton	7	15	0
Zinc (Spelter) .. .. ,,	2	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,		0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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CURRENT TOPICS.

THE DEVELOPMENT OF PHYSICAL SCIENCE.

THE past week has been noteworthy for two incidents which promise to influence most beneficially the growth of applied science in this country.

In the first place, there has been the publication of the report of the Committee, appointed by the Treasury, to consider the advisability of establishing a National Physical Laboratory. As the result of their investigations the Committee have made several important recommendations.

The perusal of their reasons for advocating the measures they suggest will prove a pleasant and instructive occupation. From the summary of the report, which appears elsewhere in this issue, it will be seen that after mature consideration, they declare in favour of a new and separate laboratory, to be established and conducted independently of the existing institutions where the verification of standards is carried out at present.

For the second incident referred to at the outset, we have the laying of the foundation stone of a new Physical Laboratory at Owens College, Manchester.

The close relationship between applied chemistry and physics cannot be insisted upon too emphatically. Almost day by day the fact is brought home to industrial chemists that of late success or failure has depended upon the dissolution of difficulties, which have been distinctly more of a physical, than of a chemical nature.

Then, again, the keenness of Continental competition, even in the almost virgin sphere of electro-technical work, and the splendidly equipped physical laboratories abroad, have convinced all competent judges how imperative is the need in this country for a counterpart of these institutions, which already have shown how directly and indirectly they stimulate trade, and are destined to revolutionise the industrial world.

What is more, the establishment of a laboratory like that which is in course of erection at Manchester—a laboratory which will rank as the third-best in the world—should be heartily welcomed and supported, because it will do more to foster genuine "technical education" than all the Mechanics' Institutes in Christendom. While ample provision is to be made for, and attention paid to, research work, it is also intended to be the home of practical teaching of the highest order. As such, it cannot fail to convince English people that the physicians capable of curing the bite of the foreign competition bugbear can only be produced in "technical" institutions of this type, and to the Owens College Laboratory in particular do we, therefore, draw the attention of all contemplating chemistry or electro-chemistry as a profession.

THE LOCAL GOVERNMENT BOARD AT FAULT.

The lot of the reformer is often a thankless one, and his path is always rough. As we anticipated, the Local Govern-

ment Board has already begun to vent its venom on the Salford Town Council, because that august body had the temerity to evade the opposition of the Board in the matter of the loan for their sewage works. They only did what was well within their rights, but to find an alternative path to their goal, when the incomparable ignorance of the Local Government Board barricaded the usual route, would be something unpardonable in their eyes. At present Salford seems to be in the same unpleasant position as Balaam's Ass. But though it is suffering the flagellations of the L.G B, we would remind the Board that in the end the Ass displayed more wisdom than the prophet, and was justified in refusing to pursue the beaten track any farther.

After all, the cudgel of the Board seems little better than a slender rush. A loan of £1,000. was sought for building lodges at two parks in the borough. Of this sum £16. was for laying the drains of the lodges. The Board reduced the loan to £984., and disallowed the £16 because of "the unsatisfactory nature of the arrangements for disposing of the sewage of the borough." What this has to do with the laying of drains, *per se*, only the L.G.B. knows. Our treatment of criminals is "unsatisfactory," but we do not forbid the maintenance of the Police Forces. As a matter of fact, under the Corporation bye-laws (sanctioned by the L.G.B.), the provision of a drain for every residence is compulsory. Such paltry spite is too ridiculous to be tolerated, and the Council was wise in instructing the Town Clerk to lay the correspondence before the three members of Parliament for the borough, so that they might bring the behaviour of the Board before the House of Commons. Now is the time for these members to effect some good for their constituents, and to justify their claims to support.

MERSEY AND IRWELL JOINT COMMITTEE.

A MEETING of this Committee was held on Monday. Mr. Alderman C. Brierley, of Bury, presided.—The Consulting Sub-committee presented reports with regard to the condition of sewerage works and the effluent therefrom. The reports stated that the Sub-committee had instructed the Clerk to ask the Stockport Corporation for a full explanation of their position, to state definitely when the works would be put into operation, and to inform the Corporation that unless their reply was satisfactory the only course open to the Joint Committee would be to take proceedings. Upon this a letter was read from the Corporation, and the Committee resolved to adjourn the matter for a month. Reports were also presented with regard to the Tyldesley Urban Council, the Chadderton Council, the Stockport Rural Council, and other bodies. Communications which had passed between Mr. F. C. Hulton, the clerk to the Committee, and Mr. A. Roberts, the clerk to the Withington District Council, were laid before the Committee. The Consulting Sub-committee had recommended that the Clerk should be instructed to write to the Withington Council informing them that another unsatisfactory sample of their effluent had been taken, and stating that in the opinion of the Joint Committee it was necessary they should construct further works for the efficient treatment of their sewage. With regard to Macclesfield, the chief inspector, Mr. R. A. Tatton, reported that the Corporation had not yet connected up a large portion of their district with the outfall sewers, and that the outfall works themselves had not been put into operation. The Sub-committee recommended that the Corporation should be asked to inform the Joint Committee, before the next meeting, when they expected to have the works in full operation. They also recommended that the Clerk should be instructed to inform the Denton Council that unless their works were put into operation before the next meeting, and the sewage satisfactorily dealt with, application would be made to the court for penalties for non-compliance with the court's order. The chief inspector had reported to the Sub-committee that he had recently received several complaints with reference to the polluted condition of the Glaze Brook, below the outlet of the Leigh and Atherton joint sewage works. Several letters had passed between the clerks to the Joint Committee and the Outfall Board with reference to the matter, and on July 21 the latter wrote to tate that the treatment of the sewage at the works would be commenced on July 25. Under the circumstances the Sub-committee recommended that the Clerk be instructed to again write to the Board, informing them that they must forthwith take the necessary steps to ensure efficient treatment of the sewage. The recommendations of the Sub-committee were adopted.

MORE ANALYTICAL DISCREPANCIES.

The Sub-committee further reported that Sir H. Roscoe had laid before them a number of analyses of effluents from the sewage works of the Corporations of Bolton, Salford, and Manchester. They recommended that copies of the analyses should be forwarded to these respective authorities. In the course of a short discussion a letter was read which had been sent on behalf of the River Irwell Conservancy Committee of the Salford Corporation, in which it was stated that there were discrepancies between the analyses made by Mr. Frank Scudder for Sir H. Roscoe and Mr. Carter Bell on behalf of the Salford Corporation. Mr. Scudder, in the course of a written reply, pointed out that in any case the effluent sent out by the Salford Corporation was not a good effluent. Mr. Alderman Jenkins said that the Salford Corporation were earnestly desirous to improve their effluent. Dr. Hewitt said that he held reports given by Mr. Carter Bell to another authority, from which he read, and in which effluents considerably better than that at Salford were described as bad effluents. The sole question for the Joint Committee was—Was the effluent sent out by Salford fit to go into the river or was it not? They did not want to hear of these little differences in analyses.—Mr. Alderman M'Dougall said the experience in Manchester was that very little difference was found between the analyses made by Mr. Scudder and by their own analyst. This was confirmed by Mr. Councillor Grimshaw.—The recommendation of the Sub-committee was then adopted.—A report was presented from the Chemical Sub-committee and adopted, and this concluded the business.

THE OWENS COLLEGE PHYSICAL LABORATORY.

THE need of a physical laboratory adapted to modern requirements and capable of accommodating a sufficient number of students has long been felt by the authorities of Owens College to be a matter of necessity. Generous donations to the extent of £10,000. and £5,000. respectively from two friends of the College, who desire that their handsome gifts should, for the present, be anonymous, made it possible to contemplate the erection of such a laboratory. The cost of a laboratory, adequate in size and properly equipped, is estimated at £30,000., and in addition to the sum of £15,000. already promised, Dr. Ludwig Mond and Mr. Henry Simon have each given £1,000., so that the sum of £13,000. still remains to be raised if the intentions of the Council are to be carried out in all their completeness. The idea is to have a laboratory as good as any of the best institutions of the kind anywhere; indeed, it is said there will only be two larger laboratories in the world—namely, those at Baltimore and Darmstadt. Professor Schuster, of Owens College, visited the laboratories on the Continent, and the plans were the outcome of careful consideration by Professor Schuster, Mr. J. W. Beaumont, architect, of Manchester, and a strong committee of the College Council, and other gentlemen, including Mr. Henry Simon and Dr. Edward Hopkinson. It is the sincere hope of the friends of the College that they will by a generous appreciation of the undertaking be able to carry it out in its entirety. The necessity for such a laboratory is very pressing, in view of the great advance made on the Continent and in America. At present Manchester, like other centres in the country, is greatly handicapped by the lack of adequate appliances. It is intended that the new laboratory shall not be merely one for research, but that it shall be a place where thorough practical teaching may be obtained. By this means it is hoped to make the physical side take the same rank which the chemical side has done.

On Tuesday, Mr. Henry Simon, whose interest in the work has been very keen, laid the foundation stone of the new building, which was commenced in August on a plot of College land adjoining Coupland-street. The laboratory will consist of a main building and a large annexe, the latter being more especially intended for electro-technical work. A prominent feature will be made of electricity, and if the funds permit, a good dynamo house will be erected. The dimensions of the principal building will be one hundred feet by sixty feet, and ample accommodation will be provided by a basement and three storeys. If in the future an extension should be deemed advisable this could be made, for the building has been so placed as to allow of an enlargement. Two of the large rooms will be devoted to spectroscopic work, and, as already indicated, a large amount of space will be given to electrical engineering. One feature will be an electro-chemical laboratory for electric furnace work. There will also be appliances for the liquefaction of air. The building will be of red brick, and the interior will be lined with glaze bricks.

The Patent List.

t is compiled from Official sources in the Manchester Laboratory, under the immediate supervision of . Davis and Alfred R. Davis, who report professionally value of Chemical Patents.

ICATIONS FOR ENGLISH LETTERS PATENT.

Metals and Oxides. J. Baxeres de Alzugaray. 19,804. Sept. 19.
assiate of Potash as a Bye-product in the Distillation of Coal. röder. 19,849. September 19.
Resin from Resinous Cane. C. D. Abel. 19,863. September 19.
c Separation of Zinc from Zinc Oxide. O. J. Steinhart, J. L. F. nd H. E. Fry. 19,876. September 19.
e Electrolysis of Fused Chlorides. O. J. Steinhart, J. L. F. nd H. E. Fry. 19,877. September 19.
Zinc Chloride. O. J. Steinhart, J. L. F. Vogel, and H. E. Fry. September 19.
Nitrous Gases in Vitriol Manufacture. A. J. Boult. 19,907. er 20.
e Cutters. H. A. Hannum. 20,035. September 21.
ric Acetate. A. Gutensohn. 20,050. September 21.
Paraffin Scale. J. Armour and F. Alison. 20,086. September 22.
re of Gaseous Ammonia. B. Piffard. 20,087. September 22.
ewage Effluents. R. H. Reeves. 20,118. September 22.
ents in Ozonisers. E. Andreoli. 20,206. September 23.
Compounds from Acetylene. H. E. Newton. 20,272. Sept. 24.

RACTS OF LATEST COMPLETE SPECIFICATIONS.

stracts are specially prepared for the Chemical Trade Journal, RIGHTS *of publication are* RESERVED. *This is the earliest stracts of Chemical and allied patents accessible to the public.*

ents in Electrodes. James Hargreaves, Farnworth-in-Widnes, Eng. Pat. 25,519. November 3, 1897.

trodes are built up of pieces of carbon, having either faced or faces, so as to form walls, arches, or columns, the blocks in position by compression screws or wedges. When the used they act as conductors for the current. If the blocks ed the joints are made up with powdered plumbago, or metal may be used. Such electrodes are built up in a con- her suitable form of cell. There are seven figures.

r Improved Manufacture or Production of Fertilizing al. J. E. J. Johnson, Crown Works, Marsh Gate-lane, Stratford, E. t. 20,660. September 8, 1897.

anufacture of beers, &c., yeast is frequently produced in ssive quantities as to form a waste product. The thin, or t, is filter-pressed, the cakes broken up and dried in a steam- pan, fitted with an agitator. The product is then further , and forms a powder containing 8 per cent of nitrogen. east may also be concentrated in a vacuum pan. To avoid tion it is advisable to add a small amount of some antiseptic nzoate of soda, or phosphoric acid, prior to the treatment.

re of a Wax-like Substance by the Action of Oxidising upon a Mixture of Resin and Paraffin. E. Schliemann, erinenstrasse, Hamburg. Eng. Pat. 16,472. July 28, 1893.

of paraffin and resin is blown with air at about 90° C. A ixture may be made up of 30% French or American colo- % paraffin scale, and 35% refined paraffin. This is heated to blown with air or oxygen. A certain amount of insoluble ates, this separation being completed by a final boiling with he resulting product is a wax-like substance of industrial e same result can be obtained by 8 to 10% of nitric acid or ent.

r Purifying Caucasian Petroleum. L. von J. Jarocki and T. wiski, both of 16, Krolewska, Warsaw, Russia. Eng. Pat. 13,881. 1898.

eatment with vitriol the petroleum is treated with a caustic ed in the following fashion:—In 100 parts of water are dis- or two parts of caustic soda and 10 or 20 parts of soda. s of this lye are used for 100 parts of oil. The whole is then th 6 parts of water for 100 of petroleum and well agitated. ing, the water and lye are run off and the oil removed. The of apparatus is employed. The oil loses about 1½% by g process. The weak lye, after a further settling to remove l, is used in the preparation of lubricants.

Improvements in the Method of Refining Oils. M. Ekenberg, Vestra Haningatam, 18 Göteborg, Sweden. Eng. Pat. 17,087. August 8, 1898.

When fatty oils are refined by forming soaps with the fatty acids, the soaps are often slimy and difficult to separate. This drawback is said to be removed by adding glycerine. In this way as much as 4 to 5% of fatty acids can readily be removed. The method followed is to neutralize the fatty acids with a solution of an alkaline hydrate in glycerine, and heat to 100° C. With agitation a compact soap forms and settles to the bottom. Afterwards the neutral oil is clarified by filter pressing. The addition of glycerine can be obviated in some cases by saponifying the fatty acids and enough neutral fat to liberate a sufficiency of glycerine. The mixture must then be heated to 100° C. or above until the glycerine acts. The quantity of glycerine required ranges from 0·1 to 0·6 per cent. of the weight of the oil.

Improvements in the Manufacture of Lead Carbonate, Ammonium Nitrate, Silicates of Sodium, and Caustic Soda. W. Garroway, Netherfield, Lanark, N.B. Eng. Pat. 22,395. September 30, 1897.

Nitric acid is generated from silica and sodium nitrate by the action of superheated steam in the manner, and apparatus, described in patents 2,489/96 and 7,066/97 (*vide C.T.J.* Nos. 510 and 569, pp. 159 and 267). The residue from this process is silicate of soda, which may be used as such or converted by lime into caustic soda and silicate of lime. The nitric acid is brought in contact with scrap lead or litharge. The nitrate of lead which results is neutralized with ammonia, and blown with carbon dioxide under pressure forming a solution of ammonium nitrate and precipitating lead carbonate, which, when washed, is used as a pigment. The precipitation may also be effected with ammonium carbonate, prepared by acting on ammonium sulphate with barium carbonate.

MILK REGULATION IN THE STATE OF MAINE.

THEY are able to control the "liquor" traffic in Maine, but apparently not equal to milk. In May, 1897, the Portland Board of Health adopted certain rules and regulations for the sale of milk within the city of Portland, which were afterwards approved by the Justices of the Supreme Judicial Court. In brief, the regulations enacted that all milk offered for sale in this city shall come only from tuberculin tested cows, or from cows certified to after a physical examination, and provided also that these cows shall be examined in the month of June each year by a veterinary approved by the Board of Health, and the regulations provided for a fine of not more than £10. for each violation of the rules. Immediately following the issue of these regulations the farmers protested, and a lively discussion arose between the farmers, veterinary surgeons, and the Board of Health. It looked as if Portland would have a milk famine. The Board of Health thereupon postponed the enforcement of their regulations. At a meeting of the Maine Veterinary Medical Association, the secretary touched upon the matter of tuberculosis and moved the adoption of the following resolutions:—

"Resolved that we believe in the efficiency of the tuberculin test, as a sure method of diagnosing tuberculosis.

"That the physical examination as a means of diagnosing tuberculosis is false and misleading, and entirely untrustworthy, and is so conceded by all noted scientists.

"That we absolutely refuse to make any physical examinations as a means of diagnosing tuberculosis, and believe it to be a means of spreading the disease by giving the public a source of security which does not exist."

As a matter of fact, the rules and regulations adopted by the Portland Board of Health are now dormant, and no special effort is at present being made to secure healthy milk. However, rumour has it that the matter will very shortly be taken up again, and it is anticipated that the health regulations of May, 1897, will be enforced.

OXYGEN AS A RESUSCITANT.—It is interesting to note that while the late Queen of Denmark was sinking, the physicians in attendance had recourse to oxygen inhalations, with a view to facilitating her Majesty's breathing which was fast becoming laboured.

THE RESIN MARKET.—The stronger tone of the market previously reported has been generally maintained during the past month, and that shippers have been actively engaged in fulfilling contracts, the exceptionally large total for the month of 168,769 barrels having been reached, this total being the highest for any month on record. Business in "pales" has not been large at the advanced prices, but there has been a good trade in "mediums" and "commons." The London market, meanwhile, has been rather quiet, holiday influences having, it is suggested, accounted for this; but prices have remained practically unaltered, and a larger demand is now looked for. All grades are firmer in the Liverpool market, and a steady trade is being done. Messrs. Chiesman & Co. predict higher prices through the winter.

PROPOSED NATIONAL PHYSICAL LABORATORY.

THE report of the committee appointed by the Treasury to consider the desirability of establishing a national physical laboratory was issued on Tuesday. The Treasury minute appointing the committee was dated August 3, 1897, and was as follows:—

"To consider and report upon the desirability of establishing a national physical laboratory for the testing and verification of instruments for physical investigation; for the construction and preservation of standards of measurements; and for the systematic determination of physical constants and numerical *data* useful for scientific and industrial purposes—and to report whether the work of such an institution, if established, could be associated with any testing or standardising work already performed wholly or partly at the public cost."

The committee consisted of Lord Rayleigh (chairman), Sir Courtenay Boyle, Sir Andrew Noble, Sir John Wolfe Barry, and Messrs. W. C. Roberts-Austen, Robert Chalmers, A. W. Rücker, Alexander Siemens, and T. E. Thorpe.

EXISTING FACILITIES.

"It appeared to the committee desirable, before coming to a decision on the matters entrusted to their consideration, to ascertain what means were available for the performance of the several classes of scientific work enumerated in the reference, and to this end the committee have taken evidence respecting the Board of Trade Standards Department and Electrical Standardising Laboratory, and have also visited these laboratories.

"In general, the committee are of opinion that the appliances and facilities of the Standards Office and of the Electrical Standardising Laboratory are fairly adequate for the performance of their statutory duties. They understand, however, that on account of the want of means for the chemical analysis of the materials used in the construction of standards, those offices would find some difficulty, without extraneous assistance, with regard to any new standards that might be required.

"They further desire to point out that many physical constants and *data* and numerical expressions are necessarily used in connection with standards and the standardising of instruments. Some of the *data* now in use at the Standards Office are known to require correction, and in the case of others further investigations appear to be desirable. There is, however, no legal obligation on the Board of Trade to establish new *data* and numerical expressions, and in consequence of the smallness of the staff of the office the work of the Department is limited to that which is strictly enjoined by the Acts of Parliament. The Department is at the present time chiefly dependent for more exact knowledge on such investigations as may be undertaken at the Bureau International des Poids et Mesures at Paris, or by foreign institutions similar to that contemplated in this country.

"There is much evidence that further facilities are needed by the public for the standardising and verifying of instruments, both for scientific and commercial use; and also that it would be of great benefit to trade if means were provided for the public testing of the quality of certain classes of materials. In particular the committee desire to draw attention to the evidence which has been laid before them as to the difficulties arising in several Government departments in their dealings with contractors and others which might be overcome by the establishment of an independent testing authority. It would neither be necessary nor desirable to compete with or interfere with the testing of materials of various kinds as now carried out in private or other laboratories; but there are many special and important tests and investigations into the strength and behaviour of materials which might be conducted with great advantage at a laboratory such as is contemplated in the reference. As illustrations we may mention investigations into the behaviour of metals and other substances under continuous or alternating stresses, which investigations are not, so far as we know, conducted at the present time at any testing institution in this country, and which could only be undertaken with satisfactory and authoritative results at a public laboratory.

"For many years the testing of certain instruments has been carried out at the Kew Observatory under the direction of the Kew Observatory Committee of the Royal Society. There is much evidence that the existence of these tests has been of great benefit to both science and industry. On the one hand it enables the maker to give, or the purchaser to obtain, an independent and trustworthy statement as to the quality of the instrument. On the other hand, the existence of the tests has led in many cases to a marked improvement of the instruments; and similar results may be anticipated by an extension of these facilities to other branches of industry.

"In the opinion of the committee the principles which underlie the proposal for the establishment of a national physical laboratory have been tested on a comparatively small scale at the Kew Observatory with the most satisfactory results.

"In addition to the physical constants and numerical *data* needed in connection with standards, there are numerous facts a knowledge of which would be of great value to science and industry. The determination of such *data* usually involves an investigation as to the method of making the determination, and a considerable expenditure of skilled labour in carrying out the determination. The committee are of opinion that, although the former part of this work will in general be initiated by individual experimenters of great skill and originality, it may in special cases be usefully undertaken by a public body. It is rather to the improvement in the details of the method of making the determination that they think that the work of a public institution will for the most part be directed. This cannot usually be carried out by private investigators on account of the expense and the length of time over which the experiments must extend. The scientific reputation to be gained is often incommensurate with the labour involved; and even when the results are of industrial importance, in many cases they cannot be protected by patents.

"There is evidence that many questions of this nature are partially investigated for technical purposes by private persons, the results being not infrequently kept secret. More complete investigations carried out at a public institution and freely published would often be of great service to industry, and there is reason to believe that a large part of the cost of such work might be defrayed by the persons directly interested in the results.

ITS MANAGEMENT AND AIMS.

"One difficulty in connection with a scheme for the determination of constants and *data* arises from the fact that the number of subjects which might be pressed for investigation would be very large. The opinion was, however, generally expressed by the witnesses that a strong governing body would have no difficulty in selecting those branches of work which were the most important, and that it would be possible to confine the work of the proposed institution, if established, within moderate limits. Nearly all the witnesses, also, have expressed the opinion that those interested in industry as well as persons devoted to the study of pure science would be willing that the Royal Society should be ultimately responsible for the management of the proposed institution, provided that industry were adequately represented on the governing body, and that the choice of the members of that body, though nominated by the council of the Royal Society, were not confined to Fellows of the society.

"After consideration of the evidence the committee have come to the conclusion that an institution should be established for standardising and verifying instruments, for testing materials, and for the determination of physical constants. Work useful both to science and industry could therein be performed for which no adequate provision is at present made, either in this country or at the Boreau International des Poids et Mesures. Such work could not, or, at all events, in all probability would not, be undertaken by individual workers, or by institutions primarily devoted to education. In the opinion of the committee the proposed institution should be established at the national expense on lines similar to, though not at present on the scale of, the Physikalisch-technische Reichsanstalt referred to above. The possibility of future extension should, however, be kept in view from the first.

"To secure the efficient performance of the work, the committee are of opinion that the director of the institution should be a man of high scientific attainments, and should act under a governing body containing representatives of both science and industry. The director should not be called upon or allowed to undertake work not connected with the institution except with the consent of the governing body. He would require the support of an adequate staff. As regards locality, while it is desirable that the institution should be near London, it is necessary that the site be free from mechanical and electrical disturbance.

"Among the most important questions considered by the committee was whether the proposed institution should be founded independently or should be a development of an existing institution. The duties of the Board of Trade, as custodian of certain standards, are defined by statute, and the committee consider that it is undesirable to alter existing arrangements in this respect. They are of opinion that the proposed laboratory, if established, should be managed by a governing body constituted and appointed as hereinafter described, and should not be under the direct control of a Government department. They recommend that the Board of Trade, as custodian of the standards, should be placed in close connection with the said governing body.

"The character of the work done at the Kew Observatory suggests that all that is really necessary might be attained by the development of that institution."

The report then proceeds to explain the circumstances as to the existing establishment at Kew, and concludes with the following

FINAL RECOMMENDATIONS.

"1. That a public institution should be founded for standardising and verifying instruments, for testing materials and for the determination of physical constants.

"2. That the institution should be established by extending the Kew Observatory in the Old Deer Park, Richmond, and that the

hould include the improvement of the existing buildings, and
ion of new buildings at some distance from the present
ry.
hat the Royal Society should be invited to control the pro-
stitution, and to nominate a governing body, on which
ial interests should be represented, the choice of the members
ody not being confined to Fellows of the society.
hat the permanent secretary of the Board of Trade should be
fficio member of the governing body; and that such body
e consulted by the Standards Office and the Electrical
lising Department of the Board of Trade upon difficult
that may arise from time to time or as to proposed
ions or devolopments."
he report is issued another volume containing minutes of the
taken by the committee.

DANGEROUS TRADES.

REPORT OF THE COMMITTEE.

hird interim report of the Departmental Committee appointed
nquire into and report upon dangerous trades was issued on
by the Home Office. The Committee state that since the
heir second interim report of 1897 they have held 34 more
They have visited 81 factories and workshops in connection
trades upon which they now report, and have examined 81
. The total number of factories and workshops visited since
nittee's appointment is 227, and the total number of witnesses
is 224. Inasmuch as it will be necessary to promote a Bill
Parliament for the acquisition of the powers by which alone
ite protection can be given to the operatives engaged in some
ndustries, the Committee suggest for the consideration of the
of State that labour and time might be saved by embodying
the recommendations themselves in the proposed Bill. By
s the vexation and delay involved in the issue and acceptance
special rules would be averted.
ngers of file-cutting, the Committee say, are to be traced to
uses, the most important of which is the "lead bed." But
many accessories to this which make file-cutting one of the
us subjects into which the Committee have been directed to
The conditions under which the occupation is carried on in
instances tend unnecessarily to aggravate the risks of lead
. Bad ventilation, overcrowding, dirtiness, want of light in
hops, their close proximity to middens, general disinclination
ecautions, the cramped position in which the work is carried
actice of licking the fingers to hold the chisel and of brushing
ff the cut file, the juxtaposition of the "stocks," dilapidation
ors and neglect of lime-washing are governing conditions
duce in this industry a vitality as low and a mortality as high
found in any industry considered by the Committee. The
s full of difficulty and complexity. The spirit of the law is
antly violated; no redress can be sought where the worker
inspector that the employer for whom he works is not the
r " of the "shop" or of the "stock." The Committee would
emphasise the anomaly by which the protection of the law is
ome workers, whilst to others in the same "shop," the con-
whose employment are in all essentials identical, this pro-
denied. The Committee feel very strongly that in the
of justice, as between workers, and perhaps even more as
nanufacturers, and in the interests of uniformity of adminis-
iis state of things ought not to be allowed to continue. No
possible without legislation. And they venture confidently
mend legislation, believing that the cause demands it, and
stification would in a very short time show itself manifest and
le. While these systems continue in vogue the Committee
anything like a guarantee of adequately safeguarding the
perso.s engaged in this industry cannot be expected. The
e make recommendations as to air-space, ventilation, water
ashing, eating of meals, &c., the responsibility being placed
occupier.
rd to galvanised iron works the Committee say they have
orks in London, Glasgow, Liverpool, Birmingham, and the
untry. The complaints from which the workers suffer are
h as bronchial and chest affections and rheumatism, which
arily incidental to any occupation conducted in open sheds
ernate exposure to great heat and cold draughts cannot be
The Committee do not consider this an industry which
scheduled as a "dangerous trade," and they are not prepared
end special rules for its control, but they make certain sug-

g to sole-stitching by American machinery, the Committee
ave visited boot and shoe factories in London, Leicester,
r and Salford, and in Scotland, and have taken a consider-
nt of evidence on the subject. It was represented to them that the heat from the gas jet causes vapourisation of the mercury, and that the inhalation of this vapour is injurious to the health of the operatives While the Committee have had complaints made to them of disagreeable results from the escape of coal gas, most commonly caused by an insufficient supply of mercury in the socket, the evidence as to mercurial poisoning was limited to two cases, and was not conclusive. In these cases death had occurred some time before the Committee's inquiry, and the evidence as to the cause was contradictory; fellow-workmen were of opinion that in the one case death was due to drinking, and in the other to inherited consumption. These men had continued work in the same employment for eighteen or twenty years. The Committee, bearing in mind the alleged connection between lung disease and mercurial poisoning, have directed their attention to the prevalence of phthisis in this industry. The figures show that nearly one-fifth of the shoemakers who die, die of phthisis, and that, while the mortality from this disease among occupied males is 185, and among agriculturists 117, the corresponding figure for shoemakers is 256. But, as has been stated, the Committee have no conclusive evidence to show that the "Blake" machine has caused any mercurial poisoning; and, inasmuch as but one case of phthisis has been alleged to have proceeded from the use of this machine, there is no ground for supposing that the high mortality from phthisis is due to its presence. The Committee are of opinion that, although the trade is not one which demands the control of the Secretary of State by special rules, there is great necessity for the careful enforcement of the requirements of section three of the Act of 1878, and amending sections, which deal with purifying the air from gases, vapours, dust and other impurities.

Glass polishing comes next under notice. The Committee have seen the different methods of polishing carried on in London, Birmingham, and St. Helens. The knowledge that the "putty powder" used is dangerous is general, and many of the witnesses spoke of their friends having suffered from colic. It may not be generally known that the dust arising from "putty powder" is almost as harmful as white lead itself. Dr. Oliver in his experiments found that animals succumbed to the influence of "putty powder" almost as quickly as to that of carbonate of lead, and when it is known that the powder employed in many glass polishing works contains as much as 70 per cent. of oxide of lead, the fact is not surprising. The Committee also saw witnesses who had been off work several months from lead poisoning, notably one who had had to give up the trade five years ago owing to continued colic and finally wrist drop in both hands. This man, who had five children, had previously been earning 30s. a week, and now made about 2s. a day in any odd job he could find, such as that of a bill distributor, sandwich man, etc. No washing appliances were supplied in the works where he was employed. The Committee submit a number of recommendations as a basis for special rules where "putty powder" is used. One is that no young person should be employed in handling or using "putty powder," and another that overalls should be supplied by the occupier to all persons engaged in the room or place where "putty powder" is used, the occupier to be responsible for their being maintained in a cleanly condition, and for their being washed not less than once a week. It is also suggested that all persons engaged in the department where "putty powder" is used should be examined once a month by the certifying surgeon for the district, who shall have power to order temporary or total suspension.

The use of converters in metal works, the manufacture and use of grindstones, and the testing of bottles by compressed air are next dealt with. On the subject of "ending and mending" in velvet works the Committee say this trade was, after the formation of the Committee, added to their reference for inquiry owing to a complaint received by the Committee that certain girls occupied in this work at Manchester had suffered injuries to their health. It was alleged that certain poisonous vapours from mixing dyes in a lower part of the building had penetrated through the floor to the room in which the girls were engaged in mending holes produced in cotton velvets by a previous process. The repairing of these damages is called "ending and mending," and the mixing of dyes which was being carried on had no necessary connection with that process. Upon local inquiry into this complaint no specifically noxious fumes could be traced, although unpleasant odours are inseparable from the preparation of vegetable dyes. The employer, when the grievance was submitted to him, removed the objectionable process from beneath the room in which the girls were employed. Further inquiry disclosed no sickness or injury to health among the workers, and as the "ending and mending" process is one which of itself is a perfectly healthy occupation when conducted under ordinary and sanitary conditions, the Committee have requested and obtained the permission of the Secretary of State to have this trade withdrawn from their reference.

"SALAMANDER" DECORATIONS.—The United Asbestos Co., Ltd., of Dock House, Billiter-street, London, have sent us a revised price list of their "Salamander" fire-proof decorations, from which we learn that, owing to improved manufacturing facilities, they have been able to institute important reductions in their prices.

Selected Correspondence.

TECHNICAL EDUCATION.

(To the Editor of the Times.)

Sir,—The funds allotted for technical education are freely spent upon secondary education, polytechnics, and kindred institutions, and upon teaching science, art, handicrafts, domestic economy, and various other subjects, but the higher education required by those who are to be the leaders in our industrial war with foreign competitors is often very inadequately supported. It is urged that the object of technical education is to a great extent philanthropic, that manufacturers can look after themselves, and that the funds set apart for technical education are not intended to benefit the class from which manufacturers are generally drawn. This is not the view entertained in Germany, where the chief aim of technical education is to train leaders for industrial undertakings, and where, as Dr. Lunge has pointed out, "even in those factories where the work is carried out with the greatest chemical refinement, the foreman and ordinary workmen are neither required nor desired to know anything of chemistry."

Taking the London system as an example, the importance attached to the provision of the highest grade of technical education may be gauged by the following figures:—In the year 1897-98 600 junior scholarships were awarded, tenable at secondary schools at a total cost of £13,462., against five senior scholarships, tenable at institutions of University rank, at a total cost of £1,125. In the same period a grant of £5,000. was made to institutions of University rank, against a grant of £27,213 to polytechnics, which, according to Mr. Quintin Hogg, are mainly intended to deal with "the rank and file of our artisan classes." The provision of the highest grade of technical education will be a source of gain rather than of loss to the artisan classes, for without such education our scientific industries cannot compete with those of other countries, and the demand for labour will decline. Moreover, if a technical scholarship system be fully developed the son of the artisan will have an equal chance with the son of the manufacturer of gaining industrial distinction. To render this possible, however, there must be not only a complete system of scholarships, but also a continuous system of technical training. At the present time there are too many authorities and too little continuity. Technical training needs amalgamation with elementary, secondary, and higher education, and the guidance of an authority in touch and sympathy with all. Elementary schools require such a course of hand and eye training, and of the training called by Professor Armstrong "juvenile research," as to sift out the future unskilled labourer, and pass on the promising pupils to the secondary schools. Similarly the secondary schools should pass on promising pupils to places of higher education, where they can be trained for original work.

If the technical training in the elementary and secondary schools is thorough, the boys can be retained longer at school, without injuring their prospect of success in skilled trades or handicrafts. If, moreover, the boys remain longer at school, and the secondary schools are efficiently equipped and organised, the need for polytechnics of the present type and of the existing ramification of evening schools and classes will gradually disappear.

Great progress has undoubtedly been made since the passing of the Technical Instruction Act, but technical education still requires to be defined, and there is still a tendency to create new institutions without regard to an organised system or to future wants. What appears to be needed is the general recognition that technical training is an essential part of education, and should be continuous from the Board school to the University. It is not improbable that it will be found that the highest grade of technical education is the most beneficial to the community.

HARRY J. POWELL.

Whitefriars Glassworks, E.C.

A SINGULAR FIRE.—A fire broke out last week at the house of Dr. Frew, of Manchester-road, Hollinwood, Oldham, by which the occupier received serious burns. Dr. Frew was engaged in his cellar at about a quarter to eleven packing some drugs, when he accidentally knocked his light out. In the gloom, whilst endeavouring to obtain a match, he knocked over a bottle of some inflammable liquid, and when he eventually struck a light the liquid exploded with a loud report, setting fire to the articles in the cellar and burning the doctor very seriously about the face and hands. The report was quickly taken to the Hollinwood Police Station, and the staff conveyed the hose cart to the surgery, information being meanwhile sent to the Oldham Fire Brigade. At the same time as Dr. Frew's injuries were being attended to by Drs. Sparrow and Bauchop, the police and firemen were working a branch from the mains, and the flames were promptly extinguished.

BACTERIAL SEWAGE TREATMEN

DISCUSSION AT THE SANITARY CONGR

AT the recent Sanitary Congress sewage treatment analysis were naturally much to the front in the Phys try, and Biology Section, and, strange to say, the views exp helpful and suggestive.

WATER ANALYSIS.

Mr. Clarence A. Seyler contributed a paper on "Recent Methods of Water Analysis." He classified the objects water analysis under three heads—namely, to determine suitability of a new supply for drinking and domestic p control the purity of a supply by periodic examination; a mine the condition of a polluted effluent and its suitability f into a stream or river. In regard to the first head, Mr. S attention to the failure of direct bacteriological methods t expectations formed of them. The enumeration of organis sidered valueless in ground waters without a previous st the well, which was usually impossible; whilst in surfa rarely afforded any fresh information. The actual detecti genic organisms in polluted waters he regarded as a pr solved problem. The President disagreed with the opi Seyler, claiming that a bacteriological examination was very After some discussion had taken place, Dr. Barwise re bearing on the subject of "Water Analysis," and said he protest against the too frequent practice of some analysts gi reports upon the suitability of samples of water for dri merely upon the results of a single chemical analysis, and h submit that it would be a much better practice for analyst the results of their analyses to be interpreted by some pers a thorough knowledge of the pedigree of the water in quest from a careful inspection of its source. In the discussion lowed, the importance of both biological and bacteriologi was laid down, and special stress was laid upon the impor samples being properly taken.

A STUDY OF BACTERIAL FILTERS.

Mr. H. Kenwood, Assistant Professor of Public Health College, London, read a paper, written by himself an Butler, on "Some Observations on the Natural Pur Sewage." The facts which they had ascertained with ammonia elimination into the atmosphere appeared to that where no material nitrification went on in a filter equilibrium was established by elimination of free ammon while the anaërobic filters were rested that the most striking were observed. The nitrifying filter gave off no free ammo the non-nitrifying filter, on the other hand, gave off du twenty-four hours of rest, a mean of 0.39 milligram of a square foot per hour. In comparing sewage kept in b contact with atmospheric air, as in the septic tank with sew the dark under similar conditions in a filter constantly sew their investigations pointed decidedly in favour of the filte filtration offered a better prospect of effecting the sepa solution of the suspended matters of sewage.

CRITICISM OF STANDARDS.

He criticised the methods adopted of making an standards, and pointed out that experiments had convince a standard for effluents having a low limit of organic nitr be preferred to any standard of oxygen absorbed, or nitrogen or to any figure of percentage purification on nitrogen. The best possible results must always be arr should be insisted upon with due regard to the nature of and to the conditions, volume, and uses of the stream ultimately to receive it. A uniform method of procedure i of samples and in the performance of the analysis was v matters stood at present, it was difficult to know what inter place upon the results of different analysts' figures.

Mr. S. Rideal read a paper on the "Quality of Influencing Its Mode of Disposal." The quality of sew quantity, as affected by local circumstances, determined th a system of sewerage. Suspended solids contained about organic nitrogen and half of the carbonaceous matter of Whatever sewage system be adopted, the raw storm-water districts should never be allowed to pass directly into a stre

Mr. W. D. Scott-Moncrieff spoke on "The Biolysis pointing out that the process of purification by biolysis was taneous but gradual. Dividing it into any convenient numbe periods, each of these represented a different character of but no one kind of organism was capable of flourishin different media or stages equally well. It had long been the chemical treatment of sewage that there were greater d

out the process of purification after suspended matters had posed of than occurred in their removal. The most interesting f the experiments which had been made was the rapid ion of the nitrogen compounds into nitrogen as nitric acid. V. E. Edeney, curator and an examiner in chemistry in the niversity, Dublin, read a paper on "The Bacterio-chemical s of Sewage and Sewage Effluents." It had been generally l, he said, that the purification of polluted waters under conditions was the work of bacteria, and that all processes for fication of sewage must, to be satisfactory, recognise the fact tral principle. Therefore the question arose, should not the employed for the analysis of the same waters be based upon the they were fermentative liquids, and that the information they seek from analysis of them was the amount of fermentative they contained apart from their other possible constituents? cess of purification of foul waters by natural agencies was a true l fermentation, a process presenting no danger to health, if an e supply of oxygen were maintained during its continuation. It lent, therefore, that a method of analysis for drainage waters, atisfactory, must indicate the quantity of fermentable organic in the water, the volume of oxygen which the bacteria would to bring about their complete oxidation, and the rate at which uld undergo fermentation. Investigations showed that the rganisms natural to foul waters practically behaved as constant l factors during the complete fermentation of the same under conditions. The mixed organisms of foul waters also affected plete fermentation of the polluting matters in the same into and distinct stages. During the first stage the organic matters ne attacked, and were completely changed into carbonic acid, a, water, and colouring matters. After the completion of this eriod of apparent rest ensued, then the second stage set in, ing it the ammoniacal nitrogen was the central object of attack, as oxidised to nitric acid.

ssor Frankland said the rapid disposal of sewage was first gone chemists, and under them obtained greatest perfection. not think there was anything which could surpass the results l by intermittent downward filtration and irrigation. In many turing parts of the country the streams were in a shockingly state, so that there was no chance of them ever being able to for drinking purposes. What they desired to ascertain was the effluent was capable of entering into putrefaction or not, ther similar action took place when the sewage was mixed with am. He should like to see more generally introduced the r test for sewage effluent, which should also be extended to mixtures. Manufacturers were frequently guilty of wholesale n, and it seemed to him that the only remedy open to public ies was to obtain powers to coerce the manufacturers to dis- s much as possible the escape of waste liquors over twenty-four and in the case of really dangerous liquids to make them first a process of purification. Powers had been obtained at that nothing should be admitted into a sewer that would the sewer or living crops. They also had the additional power de anything which damaged purification processes.—Lieut.-Col. .C., argued that until they had filters on a large scale and re tried with all matters that came down a sewer for a con- e time, they must proceed with great caution.—Dr. Porter said Mersey and Irwell district of Lancashire there were streams uld never be used for purposes of water supply. He there- mitted that no unnecessaay harassing of manufacturing interests e insisted upon, merely for sentimental and æsthetic reasons.— e Perry urged that until the question of the cost of filters and was put aside with other systems of sewage purification, s were not in a position to get off the fence on which they had ng. Mr. W. J. Dibdin said if they treated sewage by excessive lime, by carbolic acid, or any material which would act as a ant, they arrested that systematic process of destruction of the matters, and simply held up for a time the natural purifying -Dr. Hewitt considered that the incubator test was a safe to the oxygen absorbed test.—Mr. Martin said the use of a tank was preferable at Exeter. Unless they were dealing solely mestic sewage on a separate system they would have a large of mineral matter and mud in suspension coming down the The effect of this in cultivation filter must be very disastrous. lso been proved that the destruction of organisms in a tank was able owing to the time of exposure to action.

L COMMISSION ON SEWAGE DISPOSAL.—The Royal Com- on Sewage Disposal last week inspected the works erected at or the purification of sewage by the "septic" system. This ey inspected the sewage disposal works of the town councils of ster, Oldham, Chorley, and Rochdale. The offices of the sion have been removed from 16, Victoria-street, to 23, Great treet, Westminster.

COAL IN SOUTH AFRICA.

AN interesting report has been presented to the African Coal and Exploration Co., Ltd., by their engineer, who says:—"I have much pleasure in reporting on second seam of coal, proved recently at your Vaalbank colliery as follows:—In my last report I advised you that I was pushing on a main drive in our upper seam in the direction of our No. 1 borehole, on which point I anticipated finding our second seam free from all the disturbances which we found at our shaft I am pleased to state that on reaching the borehole and sinking a trial shaft I found the second seam intact and free from all disturbances. The thickness of the seam averages 6 feet of pure coal, and is quite free from shale and all other foreign matter. The roof is a strong sandstone, and the floor a strong black shale. The coal is of a first-class quality throughout the whole thickness. Analysis made by Dr. Loevy as follows. Fixed carbon, 71·19; volatile matter, 19·28; sulphur, 0·42; ash (white), 7.31; moisture, 1 80—100. Evaporative by Thompson's calorimeter—1 lb. of this coal will evaporate 12·2 lb. of water. This analysis I consider most satisfactory, and I am pleased to state that it is one of the best I am acquainted with in the Middelburg district. I have had a practical test made with this coal for steam purposes, and it is most satisfactory, proving equal to that in the lower seam at Brugspruit colliery, which, so far, has held the reputation of being the best steam-coal in Middelburg district. After satisfying myself as to the quality of this second seam, I at once decided to put down an incline from the upper to the lower seam, and work only the latter on on account of its superior quality. The incline is now completed and three drives are at present proceeding opening up this coal. I consider it now absolutely necessary for us to at once proceed to sink our main shaft, erect permanent machinery and quarters for workmen, as our plant and buildings are only capable of prospecting and developing work. With regard to sales, I have no hesitation in saying that we shall command an extensive trade for this coal. The raisings for the two weeks prior to the above report were 267 tons."

AMERICAN TRUSTS.

TINPLATE, ELECTRICAL, AND COPPER COMBINES.

IT would be interesting to know what South Wales thinks of the Tinplate Trust which is on the point of formation in America. So far as can be made out, the idea of the American manufacturers is the very natural one of endeavouring to drive the Welsh article out of their home market altogether. That they have already done a good deal in that direction without the aid of any combination whatever, and simply on the strength of the protection afforded by the high rates of duty, is conclusively proved by our own Board of Trade returns. They complain, however, that prices are not sufficiently remunerative, and they are combining together toward the patriotic end of raising them again. Seventy-five per cent. of the mills in the country are said to have given their adhesion to the proposed Trust, and presumably the rest will be compelled in due course either to come in or submit to be "squeezed" out of business altogether. It is not quite easy to see, however, how the market for Welsh plates is to be killed. If the combine were designed to reduce prices by economies in working and so forth, so that the Welsh article might be undersold all round, we could understand the position. But the tariff is not absolutely prohibitive, and such advantage as the American manufacturers boast of comes from their convenient location, and the improvements made in machinery, added to the high duties. If they raise their prices there should be more Welsh plate consumed. The electrical interests have been the latest to be merged into another of those trusts for which the United States has become so famous—or infamous. The latest combination ensures a capital of $25,000,000. for the Trust, which merges the Westinghouse Electrical Company of Pittsburg with the Walker Electrical Company of Chicago. This action results in the almost practical consolidation of the electrical business. The effect of the new Trust is likely to be exceedingly great, for the Walker Manufacturing Company, which is now incorporated in it, built the machinery for about ninety per cent. of the cable apparatus in use throughout the country since 1894, when it went into the business. Members of the metal market are exhibiting a great deal of interest respecting reports about an amalgamation of the Anaconda Copper Mine with the Boston, and Montana, owned by William Rockefeller and the Lewisshons. All information respecting this amalgamation is eagerly followed, as it is thought that any such movement might be reflected in the supplies of metal coming to hand, which may have the effect of sending up the price of the metal per ton. In fact, all the conditions point to a little "boom" both in the copper share market and in the metal market. During the past few years the demand for copper has greatly increased, but supplies of the metal have not improved in proportion to the demand.

BRITISH TRADE IN RUSSIA.

THE following figures show the actual totals of the articles imported to Riga in 1896 (the latest statistics), and the following indicates the position of each country with regard to the import trade of Riga in that year :—

Country.	Per Cent.
Great Britain	37·5
Germany	35·6
Belgium	14·7
Sweden and Norway	3·3
Denmark	1·2
France	0·5
Holland	0·5
Other countries	6·7

Taking the items enumerated in the list separately, the importation of coal and coke appears again to have advanced. This is undoubtedly due to the development of industries, and it is satisfactory to know that there is no question of competition with Great Britain in these articles. But in iron and steel, machinery, cutlery, cotton goods, chemical products, paints and colours, india-rubber goods, etc, it is quite another thing. Here it is that German persistence is to be seen, and not only seen but admired. Fortunately, some of our home manufacturers are waking up to the fact that the time has come for them to enter the lists with their Teutonic competitors and show what they can do, but, generally speaking, British trade in this country is allowed too much to take care of itself. The idea that goods of British manufacture need no pushing is apparently too deeply seated to be eradicated all at once. In previous reports (says the Consul for this port) I have touched upon this subject, and my colleagues have constantly referred to it, but the only result has been a crop of criticism from the press. But in spite of all this I feel it my duty to bring it forward again, and in support of my statements I may mention that a gentleman of great experience as a traveller on the Continent told me the other day that where he met in the course of his journeys through Russia with one British commercial traveller he found at least thirty Germans, three Austrians, and two Frenchmen. That was the proportion he had arrived at as the result of his observations, and he went on to say that he had frequently heard it stated that many Russian firms would gladly buy English goods if only English travellers would call upon them, but as they do not their orders are given to others. The articles which appear to be neglected by English houses are :—Steam engines and machinery of every description, engine fittings and packing, ship's fittings, sanitary fittings, every description of Birmingham fancy goods, cooking utensils, first-class hosiery, and doubtless there are many other things which might be included in the list. It may be urged that it is a difficult matter to find a sufficient number of efficient men to represent British firms in a country like Russia. I know that this is the case, and that the same want is felt in other countries, notably in Austria, and to show that the Austrians are taking things seriously in hand a project is being formed for the establishment in Vienna of schools, called export academies, for the purpose of training young men as travellers, and especially to give them a knowledge of languages, such as Russian, Spanish, Portuguese, Italian, &c., all free, or nearly so. Could not something on the same lines be started in the principal manufacturing centres in England? The Germans, I hear, are thinking of opening classes in Berlin for teaching young commercial men Chinese. But besides preparing an efficient staff of men for the road, I think our manufacturers would do well to adopt the suggestions I ventured to make in my report for 1896, and do something in the shape of establishing British agencies in this country, and it would give me great pleasure to assist in promoting an undertaking of this character in my district.

Testing Station of the British Fire Prevention Committee.—The much felt requirement for thoroughly independent tests with fire-resisting materials and systems is now to be met by a testing station, organised under the auspices of the British Fire Prevention Committee, where in lieu of the generally very one-sided exhibitions given by makers and inventors, the investigations will be carried out reliably in an essentially practical manner, and on scientific lines. The Committee's testing station will be near Regent's Park, within easy reach of the West End, and the necessary arrangements are already being made to inaugurate the first series of tests. Systematic research work in the question of fire resistance has as yet only been commenced in the States, and the testing station in question will be the first of its kind in Europe. The preliminary arrangements have been in the hands of Mr. Edwin O. Sachs, acting for the Executive, and Mr. Frederic R. Farrow, acting for the Commercial Section. The tests in each case will be undertaken by the Executive in conjunction with representatives of the Council and the general body of members, and the reports will take the form of statements of facts supplemented by diagrams and photographs, duly attested.

Trade Notes.

Dividends.—*Santa Rita Nitrate.*—The directors have declared an interim dividend for the current year of 2s. 6d. per share, less income-tax, payable on October 15. *Commercial Gas Co.*—In their half-yearly report the directors recommend dividends at the rates of 13½ and 10½% per annum respectively on the old and new stocks.

Change of Address.—Messrs. Walton, Jackson and Co., chemical manufacturers, formerly of 40, Blackfriars-street, Manchester, advise us that all communications should be addressed to them at the Globe Chemical works, Marple, near Manchester, to which address their commercial offices and laboratories have been transferred.

Nitrate Statistics.—The Permanent Nitrate Committee's public statistical circular for October states :—"Nitrate of Soda—Total exports to Europe, September, 1,929,000 quintals ; loading for Europe, October 1, 3,075,000 quintals ; imports, Europe, September, 42,680 tons ; deliveries, Europe, September 45,830 tons. Visible supply, Europe, October 1 ; Stocks and afloat, 297,090 tons."

Glenboig Fire Clay Co., Ltd.—The accounts of the Glenboig Union Fire Clay Company (Limited) for the year ending 31st August last, after providing for maintenance of works and all current charges, and including £825. 12s. 6d. brought forward from the previous year, show, subject to completed audit, a gross balance of £16,210. 8s. 8d. The directors, at their meeting a few days ago, agreed to recommend to the shareholders at their annual general meeting, to be held next month, that the same be disposed of in the following manner :—For depreciation on capital expenditure, £2,000 ; in payment of a dividend at the rate of 10%, £13,500 ; leaving a balance to be carried forward of £710 8s. 8d. The register of transfers will be closed from the 1st till the 14th prox., both days inclusive.

Rio Tinto Company, Ltd.—The directors in an interim report state that the deliveries of pyrites under existing contracts have been well maintained at about the same rate as during last year. The contracts for Germany, which expire on the 31st December, have been renewed for a further period of three years on terms which are more advantageous to the Company than before. The price of copper began to rise during the early part of the current year, and the average of sales up to the present time is well above that obtained for the produce of 1897. The war between Spain and the United States has not much interfered with the Company's operations ; while the additional taxation on exports it has resulted in, is compensated for to some extent by the rise in the rate of exchange. The directors declare a half-year's dividend of 2s. 6d. per share less income tax on the 5 per cent. preference shares and an interim dividend of 20s. per share on the ordinary shares, both payable on the 1st November.

Developing Canadian Nickel Mines.—Mr. A. F. Eden, the managing director at Birmingham of the H. H. Vivian Company, Swansea, is at present exploring some properties at Sudbury, Ontario, owned by the company. The properties were partially developed some years ago, but since the death of Lord Swansea, the late head of the Vivian Company, operations have been suspended. Work on these properties is to be resumed. Mr. Eden is very enthusiastic over the prospects for the nickel industry. He thinks there is no question of the importance of nickel in connection with the manufacture of steel. Nickel is now largely used by Great Britain, Russia, and the European Powers engaged in building armoured vessels, and is entering into more general use in the construction of locomotives. In fact, nickel is becoming indispensable in the manufacture of steel for almost every purpose. Mr. Eden was asked if it were not a fact that the United States manufacturers were pressing their English competitors very closely in the British markets, but he desired to be excused from expressing any opinion on the question.

Market Reports.

TAR AND AMMONIA PRODUCTS.

The improvement in benzols has been temporary, and 90's are now down again at 8½d. to 9d. and 50/90's at 9d. Carbolic acids are fairly active, but there is no quotable change in values. Naphthas still rule easy at last quotations. Anthracene is quite lifeless at 4d. for 30% A and 3d. for B. Pitch steady at 25s. 6d., f.o.b. East Coast ; next year 26s.

Sulphate of ammonia is dull. The inquiry for forward has been good, but buyers' ideas are so low that little business has resulted, and

ns have mostly been withdrawn. Closing prompt values are : , £9. 12s. 6d.; London outside makes, £9. 15s.; Liverpool, . 6d.; Hull and Leith both £9. 15s. Nitrate of soda firm.

MISCELLANEOUS CHEMICAL MARKET.

ess in the alkali trade is moderately active ; prices for spot and livery are steady, the chief alterations in values being for 1899 . For the present, spot quotations of caustic soda are as —f.o.b. Liverpool, 77%, £7. 17s. 6d. ; 74%, £7. 12s. 6d. ; 7. 2s. 6d. ; 60%, £6. 2s. 6d. nett per ton. Alkali, 58%, 6d. to £4 bags f.o.r. Soda crystals unaltered at 47s. 6d. r. Leblanc ash nominal at 1¼d. per degree. Sulphur firm at 6d. per ton. For bleaching powder demand is still below pro- and price continues to have a downward tendency both for and forward delivery ; nearest spot value is £4. 17s. 6d. to £5. kers' works, and £4. 12s. 6d. to £4. 15s for contracts over Chlorate of potash has further advanced to 4d. per lb. Soda, 4d. per lb. Borax, £13. 10s. to £13. 15s. per ton. Potash, nd carbonate, are in good demand both for prompt and for- livery, and prices are unchanged. Yellow prussiate of potash easier at 6½d. per lb. Soda, 5d. per lb. Brown acetate of advanced to £5. 5s. to £5. 10s. c.i.f. ; grey, £7. Acetates of la, and acetic acid are unchanged in value. Sulphate of copper market and quotations rule from £17. 5s. to £17. 10s for spot y market. White powdered arsenic continues in good request . 15s. is to day's value f.o.r. Garston. Higher prices are quoted ard delivery. Aniline oil and salt are easier at 5d. and 4½d. espectively. Nitrate of soda steady at 7s. 7½d to 7s. 9d. per

REPORT ON MANURE MATERIAL.

continues to be a quiet market, though prices are firm all

derable business in mineral phosphates is reported to have been r the Continent, 1900 shipment, at about ½d. per unit under es recently paid for 1899 shipment, and there is further inquiry. is good inquiry for River Plate bones, but in the absence of cargoes offering, no business is reported. For Bombay bone spot, up to £4. 17s. 6d. per ton has been paid, and it is doubtful £4. 15s per ton would now be accepted for shipment. te of soda is quiet on spot at 7s. 7½d. per cwt. for good up to per cwt. for refined quality. In the forward position the market irm, there being a marked shrinkage in visible supply, which e several months of exceptional heavy shipments to adjust.

THE METAL MARKETS.

DON, WEDNESDAY.—Pig iron steady: Scotch warrants at 49s. 0d ; Middlesbro', 43s. 7d cash ; and hematite, ½d. Copper firm : Chili bars, G.O.B.'s and G.M.B.'s, 52. 12s. 6d. to £52. 17s. 6d. cash, and £52. 16s. 3d. to £53. 1s. 3d. months. Tin steadier : Straits closed at £75. 2s 6d. to s. 6d. cash, and £75. 8s 9d. to £75. 18s. 9d. three months ; an, £75. 15s. ; English ingots, £77. 15s. Lead firmer : , £12. 18s. 9d ; English, £13. 2s. 6d ; Silesian spelter, , £22 5s. Nickel, 1s. 2½d. Antimony, £37. Quicksilver : nds, £7. 5s. ; second hands, £7. 4s. *Copper shares* steady : ⅞ to 5 ; Copiapo, 2⅜ to 2½ ; Libiola, 1⅞ to 2⅛ ; Mason rry, 3⅛ to 3 15/16 Rio Tinto. 29 9/16 to 29 11/16 ; Tharsis, 7 1/16 to 7 3/16. SGOW, WEDNESDAY.—Market easier, and a good business. lone at 49s. 1d to 49s. 0d. cash, and 49s 3½d. to 49s. 3d. month ; 49s. cash ; sellers, 49s 0½d. Cleveland done at 43s. 7½d. uyers, 43s. 7d. cash ; sellers 1d. more. Cumberland hematite 55s. 5d. cash ; and 55s. 6½d. to 55s. 6d. month ; buyers, d cash ; sellers, 55s. 5d. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

.—Palm oil is steady, but there is only a small business doing or spot or to arrive. Olive is steady, with a moderate demand at full rates. Linseed is quiet, with Liverpool makes in casks at 18s. 6d. to 19s. per cwt. Cottonseed is rather d, but values remain at 15s 9d. to 16s. for Liverpool refined. oil is steady, with a moderate inquiry ; sellers are offer- d seconds Calcutta at 3 5/16 d., first pressure French at 3 1/16 d., adras 3d. to 3 1/16 d. per lb. Tallow is firm, with a strong : South American mutton has been moving freely at ., and beef at 23s., store. Resin is well maintained in sition and price for all grades. Spirits of turpentine are firmly r 23s. per cwt. on spot, and there is a fair business doing thereat. Petroleum unchanged, with American 6⅛d. to 7½d. and Russian refined 5¼d. per gallon.

CAKES.—The small supplies of American Western linseed and the good demand experienced for spot parcels have had the effect of again advancing the value 2s. 6d., sellers being now very firm at £6. 12s. 6d. to £6. 15s., whilst Liverpool makes, though in very fair request, remain without any alteration in the quotation. Good to choice brands of American decorticated cottonseed have sold to a very fair extent at late rates, viz , £5. 10s. to £5. 17s. 6d. per ton, according to quality, and there is rather a better feeling ruling thereat. Liverpool makes remain as last quoted at £5. 15s. to £6. 10s. for decorticated and £4. to £4. 7s. 6d. per ton for undecorticated makes, according to brand, with a moderate trade doing in the former, and fair sales making in the latter at the respective quotations. Spot parcels of Egyptian continue to have a firm market, and the quotation is well maintained at £3. 15s. per ton, and there is a moderate inquiry going on thereat.

COLOURS.—Prices are steady, and practically without change. Ochres : Oxfordshire—common £10., medium £12 , best £15 ; Derbyshire—common 40s., medium 50s., best 60s. ; Welsh—best 9 s.; seconds, 50s., and common, 18s. ; Devonshire, 40s. to 45s. ; French, J.C., 65s. Umber : 40s. to 45s. White lead : £16. Red lead unchanged. Venetian red : £6. to £10. Cobalt : Prepared oxide, 9s. 9d. ; black, 9s. ; blue, 6s. Oxide of iron : Common, £7. ; medium, £10. ; finest, £20. Zinc oxide : £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—With the opening of the new month values, both in linseed and cottonseed oils, have fallen away, the markets for which are flat. The stocks of seed in the port at the close of September were :—Linseed, 1,182 qrs. against 1,422 qrs. August 31st ; rapeseed, 180 qrs. against 880 qrs. ; cottonseed, 740 tons against 1,520 tons ; whilst the imports during the month have been linseed, 57,045 qrs. against 8,012 qrs. during August ; rapeseed, 2,813 qrs. against 11,457 qrs. ; cottonseed, 10,396 tons against 11,258 tons. Linseed oil closes quiet, the spot quotations being 16s. 4½d. sellers ; 16s. 1½d. last three months ; Jan.-April, 15s. 1½d. to 15s. 3d. ; boiled and refined firm at £1. to £1. 10s. per ton extra. Refined cotton oil flat, being quoted spot, naked, 14s. 4½d., which represents a decline of 10s. per ton upon quotations a week ago ; forward Nov.-April new season's oil, 13s. 1½d. to 13s. 3d ; export barrels £1. 10s. ; casks £1. per ton extra. Castor oil, extracted here—cold drawn (pharmaceutical), in barrels, 30s. 6d. per cwt. ; in cases 3¾d. per lb. ; pure first pressure 28s. per cwt., in barrels, 3 3/16 d. per lb. in cases ; second pressure 27s. per cwt., in barrels, 3 1/16 d. per lb. in cases. Olive oil in fair demand; prices unchanged. Olive oil soap (Italian) – values firm and of difficult sale at enhanced prices, of which there is little prospect of any reduction until about February. Oleines a trifle easier, £18. 5s. per ton, f.o.b. Continental ports. Cod oils £16. to £18. per ton. Resins firm and unchanged.

CAKES continue a firm market. Linseed cakes firm : 95% pure, £7. 12s. 6d. to £7. 15s. Oilcakes (linseed), £6. 12s. 6d to £6. 15s ; Russians, £7. 2s 6d. to £7. 5s. ; Americans, £7. to £7. 2s. 6d. Cotton cakes very steady, best makes, £4. 2s 6d. ; seconds, £4 to £4. 1s. 3d. ; Rape cakes, none offering.

PAINTS.—Painters' colours and chemicals have been largely exported during the month with a good all round demand for home. Ordinary colours, such as red oxide, Venetian red, blue blacks, and greens, are quoted from £10 per ton. Dry mineral colours from £3. to £8. per ton. Black varnish, £5. 10s. per ton. Carbolic powder, 20%, £4. 5s. ; 15%, £3. 17s. 6d. ; 10%, £3. 10s. per ton. Sanitary fluid from 10d. per gallon.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

In the general market the only feature of any prominence is the extra diligence in the despatch of the Baltic parcels, due to the advance of the season. In other respects the industry is quiet and indeed very dull with prices nominally upheld, but nothing like vigour discoverable anywhere. Sulphate of copper is again a little firmer, and saltcake also is somewhat stronger. Sulphate of ammonia has been doing rather badly during the week owing to great scarcity of demand. The mean for prompt Leith just now is £9. 16s 3d. but very likely there is at least one seller who would take the fraction less. Mineral oils and paraffins are all at the old figures and moving off satisfactorily for the season. Makers, however, are hampered with an agitation amongst the shale miners, and the industry may have a strike to face.

Chief prices current are :—Soda crystals, £2. 5s. to £2. 12s. 6d. nett, Tyne ; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow ; caustic soda, white, 74° £7. 12s. 6d , 70/72° £7. 2s. 6d , 60/62° £6. 2s. 6d., and cream 60/62° £6. all nett, Liver-

pool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. od.; borax, English refined, £13. 10s., and boracic acid, £25. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d less 5%, Liverpool: nitrate of soda, 7s. 7½d. to 7s. 9d.; sulphate of ammonia, £9. 15 to £9. 17. 6d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £17. 2s. 6d to £17. 7s. 6d., less 5% Liverpool; paraffin scale, hard, 1⅜d. to 1½d. per lb., and soft 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning), No. 1, 6d.; and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical trade is quiet and with very little alteration in prices or demand. Soda crystals locally are £2. 12s. 6d. per ton, gross weight. Caustic, 70%. £7. 5s. per ton; 76/77%, £8. per ton. Sulphur scarce at £4. 15s. per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do. hards, £5. 10s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 5s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt continues very steady at 9s. 6d. per ton, f.o.b. Tees, with a fair business doing.

COALS.—The coal trade continues fairly steady and there good demand for steam and bunker qualities. Manufactu household coals are dull. Coke firm for both export and loc 18s. 6d to 21s. Best Northumbrian steam, 10s. 6d. to 11s. second qualities, 9s. 6d. to 10s. per ton; small steam, 5s. 6 per ton; gas coals, 10s. to 11s 6d. per ton; bunker coals, 8 9s. per ton; coke, 18s. 6d. to 21s. per ton.

New Companies.

Beetroot Sugar Association of Lancashire, Ltd. R as a limited company by guarantee to take over the busines Beetroot Sugar Association of Lancashire, and to promote the of the beetroot sugar trade. The management is vested in a Registered by Cameron, Kemm & Co., Gresham House, Old street, E.C.

Goddard, Massey & Warner, Ltd.—CAPITAL £90,000. shares (3,000 5% cum. pref.) This company has been fo acquire the business carried on at Traffic-street, Nottingham, a where, as Goddard, Massey & Warner, and to carry on the bu mechanical, sanitary, chemical, and general engineers, bridge b tool makers, metal workers, etc. The subscribers to the memo of association are:—E. Massey, Cyprus-road, Nottingham, e W. Warner, Hope Drive, The Park, Nottingham, engineer; J Houndsgate, Nottingham, engineer; H. Walker, Newcastle Ch Nottingham, C.E.; G. G. Hill, Arnot Hill, Nottingham, gen C. Shardlow, Beeston, Notts, engineer; J. H. Shaw, Talbot Nottingham, yarn spinner. Registered office, Traffic-st., Notti

Indigo Defence Association, Ltd.—Registered as a company by guarantee, with objects as fully indicated by the ti of members not to exceed 1,000; each liable for £1. The nu directors is not to be less than 7 nor more than 15; the subscri to appoint the first; remuneration as fixed by the company. tered by Morgan & Co., 33, Old Broad-street, E.C.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J. A. Fox, J. Fox, B. Fox, and A. Smith, soap manufacturers, Ma under the style of Fox Bros & Co

IMPORTS OF CHEMICAL PRODUCTS OF THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending September 24th.

Acetic Acid—		
Holland,	100 pks.	R. W. Greeff & Co.
Belgium,	5	Leach & Co.
Acetone—		
Holland,	1 dms.	T. H. Lee
Austria,	20 pks.	D. T. Domeier & Co.
Alkali—		
France,	116 c.	J. Harrison
,,	110	J. Barber & Co.
U. States	1,000	E. T. Hearne
,,	1,500	Furness, Withy & Co.
Belgium	400	H. Wallace & Co.
,,	16	Rosenberg, Loewe & Co.
Alumite—		
Sydney,	£820	J. Allen & Co.
Antimony Ore—		
France,	1¼ t.	H. Johnson & Sons
Germany,	32	Watson's Wf. Ld.
Asbestos—		
Holland,	£9	T. H. Lee
Germany,	200	Craven & Co.
Italy,	162	Imperial Asbestos Co.
,,	10	British Asbestos Co.
Austria,	10	R. Baelz & Co.
Barytes—		
Holland,	18 pks.	J. Kitchin Ld
Germany,	19	R. W. Greeff & Co.
Belgium,	20	J. L. Lyon & Co.
,,	33	W. Harrison & Co.
,,	50	O'Hara & Hoare
Holland,	296	W. Harrison & Co.
Bleaching Powder—		
France,	108 cks.	J. M. Steel & Co.
Bone Meal—		
E. Indies,	200 t.	Hollinghurst & Co.
,,	400	Dundee, Perth, & L. S. Co.
Caoutchouc—		
Zanzibar,	37 c.	L. & I. D. Jt. Co.
France,	40	H. Johnson & Sons
E. Indies,	46	W. M. Smith & Sons
,,	9	H. Devitt & Co.
,,	163	Butler's Wf., Ld.
,,	200	Prop. Bull Wf.
,,	100	Huttenbach & Co.
Zanzibar,	66	Hale & Son
M'za'bique,	64	L. & I. D. Jt. Co.
Straits,	48	Elkan & Co.
,,	1,300	H. W. Jewsbury & Co.
Madagascar,	4	Procter Brs.
Belgium,	25	Prop. Bull Wf.
U. States,	4	L. & I. D. Jt. Co.
Holland,	18	S. Figgis & Co.
,,	2	Adam Pearson & Co,
Straits,	566	L. & I. D. Jt. Co.
Carbolic Acid—		
Germany,	50 pks.	J. G. Back
,,	50	Blagden, Waugh & Co.
Castor Oil—		
Belgium,	28 brls.	R. G. Hall & Co.
E. Indies,	15 cs.	Perkins & Homer
,,	257 cks.	Cayzer, Irvine & Co.
Caustic Potash—		
Germany,	54 pks.	J. M. Steel & Co.
France,	12	J. A. Reid
,,	40	W. E. Cole
,,	20	F. W. Berk & Co.
Chemicals (*otherwise undescribed*)		
Germany,	£910	A. & M. Zimmermann
U. States,	5	Carter, Paterson & Co.
Holland,	30	T. H. Lee
,,	14	Phillipps & Graves
Belgium,	29	John Cockerill Line
,,	64	T. Palmer
Germany,	32	Butler's Wf., Ld.
,,	25	Phillipps & Graves
,,	88	L. & I. D. Jt. Co.
,,	17	H. Lorenz
,,	30	J. Norrenberg & Co.
France,	40	Mory & Co.
Belgium,	387	T. H. Lee
France,	86	Mory & Co.
Germany,	60	P. Heydmann
,,	13	C. Windschugel & Co.
Holland,	160	H. Harkness
Austria,	70	L. & I. D. Jt. Co.
Belgium,	10	Rosenberg, Loewe & Co.
Cream of Tartar—		
France,	5 pks.	M. Ashby, Ld.
,,	10	B. & F. Wf. Co.
,,	10	F. C. Devon & Co.
,,	3	H. Johnson & Sons
,,	5	C. Christophersen & Co.
Dyestuffs—		
Annatto		
Denmark,	2 pks.	M. D. Co.
Argois		
France,	308 pks.	Lon. & Til. Ltge. C. & D. Co.
Cochineal		
Canaries,	36 pks.	W. M. Smith & Sons
,,	4	L. & I. D. Jt. Co.
,,	9	Swanston & Co.
Cutch		
Straits,	2,002 bxs.	J. Swire & Sons
,,	300	Hoare, Wilson & Co.
Divi Divi		
E. Indies	145 pks.	Culverwell, Brooks & Co.
Extracts		
France,	65 pks.	B. & F. Wf. Co.
Denmark,	2	M. Dk. Co.
France,	30 cks.	Beresford & Co.
,,	550	Boutcher, Mortimore & Co
Austria,	200	,,
Canada,	220	,,
Gambier		
E. Indies	260 bls.	J. W. Co
Indigo		
E. Indies,	5 chts.	R. V
,,	18	A. Yeu
Kamela		
E. Indies,	5 cs.	G. &
Logwood		
W. Indies,	60 t.	G. T
Myrabolams		
E. Indies,	308 bgs.	Dalton
,,	683 pks.	W.
,,	1,366	
Banlipatam,	672	Hoar
E. Indies	2,000	P.
,,	200	H. J. Perlb
Tanners' Bark		
Adelaide,	20 t.	J. W. Co
Germany,	100	
Natal,	1	Flack,
Belgium,	74	Lea
Germany,	25	G. R. Hal
Turmeric		
E. Indies,	100 pks.	G.
Valonia		
Turkey,	60 t.	A. & W
,,	145	Boutcher, M
Dyestuffs (*otherwise unde*		
France,	20 pks.	Gellatly,
Germany,	15	Bremer,
Denmark,	1	Tegt
Holland,	5	C.
France,	30 bls.	Burnett, Be

Farina—
U. States, 27 pks. D. Sedgley
Germany, 50 J. Barber & Co.
Holland, 100 T. H. Lee
Germany, 10 Butler's Wf., Ld.
" 100 R. Bennett & Co.
U. States, 4 A. & N. Co-op. Scty.
Austria, 20 L. & I. D. Jt. Co.

Glucose—
Germany, 52 pks. 420 cwts. Bennett S. S. Co.
U. States, 50 260 Lon. & Til. Ltge. C. & D. Co.
" 500 3,300 R. G. Hall & Co.
" 150 900 E. & T. Pink
" 50 80 J. Barber & Co.

Glue—
France, £42 Burnett Brs. & Sons
U. States, 84 Armour & Co.
Germany, 292 J. Barber & Co.
" 3 Home and Colonial Tea Co.
Belgium, 765 R. G. Hall & Co.
Germany, 29 L. & I. D. Jt. Co.
" 501 B. Galloway
Russia, 300 M. H. Voss
Germany, 197 Craven & Co.
Austria, 500 Steinhoff, Sons & Co.
France, 20 B. & F. Wf. Co.
" 12 Bennett S. S. Co.
Holland, 20 T. H. Lee

Glue Stock—
Germany, 70 bls. Hicks, Nash, & Co.
" 82 L. & I. D. Jt. Co.
E. Indies, 28 Brown & Elmslie
" 88 J. W. Cook & Co. Ld.
Germany, 49 sks. Elsan & Co.
Holland 5 bls. Phillips & Graves
Germany, 84 W. Balchin, Ld.
Gibraltar, 58 bgs. Beresford & Co.

Lead Acetate—
Germany, £65 R. W. Greeff & Co.
Holland, 80 Beresford & Co.

Lithopone—
Holland, 60 cks. A. Zumbeck & Co.

Manure—
Germany, 30 t. F. W. Berk & Co., Ld.
Belgium, 8 H Johnson & Sons

Methyl Alcohol—
Germany, 1,350 gls. Lister & Biggs
France, 2,000 "
" 2,370 E. Catlin
U. States 70 pks. H. G. Brown
Germany, 1,200 T. Jacobs & Co.

Mica—
E. Indies, £96 Dundee, Perth, & London S. Co.
" 120 E. Flageolet & Co.
" 690 W. M. Smith & Sons
Ceylon 215 E. Davis & Co.
Germany, 9 Craven & Co.
U. States, 73 J. W. & T. A. Smith

Molasses—
U. States, 250 brls. 1,500 c. J. Forsey
" 50 307 Barratt, Tagant, & Co.
Germany, 100 550 Ohlenschlager Brs.
Holland, 400 2,200 J. R. Francis & Co.

Nickel Salts—
Holland, £40 R. W. Greeff & Co.

Ochre—
France, 229 cks. W. Harrison & Co.
Holland, 17 pks. Phillipps & Graves
Spain, 60 Mancha & Co.
France, 1 O'Hara & Hoare
" 3 Stobbs, Pollard, & Co.

Permanganate—
Holland, £570 Phillipps & Graves

Phosphate Rock—
Belgium, 37 t. Anglo-Contl. Guano Works
" 50 H. & E. Albert
France, 675 West & Penrose
" 153 Anglo-Contl. Guano Works

Pitch—
N. Russia, 425 cks. Fellows, Morton, & Co.
" 1,100 Linck, Moeller, & Co.

Plumbago—
Ceylon, 253 brls. R. G. Hall & Co.
" 778 J. Thredder, Son, & Co.
" 136 Beresford & Co.
" 95 Doulton & Co.
U. States, 10 Lunham & Moore
" 13 cs. "
Germany, 17 cks. B. Galloway

Potash—
Germany, 25 kgs. R. W. Greeff & Co.

Potassium Bromide—
Germany, 2 cs R. W. Greeff & Co.

Potassium Carbonate—
France, 20 c. W. E. Cole
" 75 J. A. Reid
Germany, 100 J. M. Steel & Co.
" 20 Petri Brs.

Potassium Muriate—
Germany, 14 pks. Union Ltge. Co., Ld.
" 800 F. W. Berk & Co., Ld.

Potassium Oxalate—
Belgium, 20 kgs. R. W. Greeff & Co.

Potassium Oxychloride—
Sweden, 200 pks G. Boor & Co.

Potassium Permanganate—
Holland, 30 pks. R. W. Greeff & Co.

Potassium Sulphate—
Germany, 508 pks. D. de Pass & Co.

Pyrites—
Hong Kong, 4 t. Perkins & Homer
Spain, 1,948 Naylor, Benzon, & Co.

Rosin—
France, 50 cks. Phillipps & Graves
U. States, 250 brls. F. & S. Chiesman & Co.
" 1,000 H. Hill & Sons
" 200 S. Hartmann Comp. Co.

Salicylic Acid—
Germany, 30 pks. Butler's Wf., Ld.

Saltpetre—
E. Indies, 140 bgs. Lucas & Spencer's Wf.
Germany, 20 cks. L. & I. D. Jt. Co.

Soap—
U. States, £7 L. & I. D. Jt. Co.
" 480 E. Fellingham
" 24 Mordance Brs.
" 45 Lunham & Moore
Belgium, 68 D. C. Thomas & Sons
Holland, 148 Phillipps & Graves
" 10 T. H. Lee

Sodium Bichromate—
Germany, 51 pks. A. J. Neale

Sodium Nitrate—
Germany, 19 cks. H. Lambert

Starch—
Belgium, 574 pks. T. H. Lee
" 370 Becker & Wagner
" 37 Leach & Co.
" 886 T. Ronaldson & Co.
" 40 Pearce, Duff, & Co.
" 200 J. Barber & Co.
" 885 E. & T. Pink
Germany, 680 Horne & Co.
" 2 L. & I. D. Jt. Co.
Holland, 2,776 Little & Johnston
" 103 Hernu, Peron, & Co.
" 500 E. Olyett & Sons
France, 560 W. E. Cole
" 40 J. Barber & Co.
U. States, 200 W. G. Taylor & Co., Ld.
" 2,000 bgs. Union L. Co., Ld.

Stearine—
Belgium, 63 bgs. H. Hill & Sons

Superphosphates—
Belgium, 100 t. Anglo-Cont. Guano Works

Tar—
N. Russia, 925 brls. W. F. Malcolm & Co.
" 23 F. & S. Chiesman & Co.

Tartaric Acid—
Holland, 10 pks. F. C. Devon & Co.
Belgium, 4 R. W. Greeff & Co.

Turpentine—
U. States, 3,324 brls. Nickoll & Knight

Varnish—
Belgium, 5 pks. Wilson & Co
Germany, 1 Butler's Wf., Ld.
U. States, 6 Pinchin, Johnson, & Co.

Verdigris—
France, 1 pk. B. & F. Wf. Co.

White Lead—
Holland, 20 pks. Blundell, Spence, & Co.
" 22 A. & M. Zimmermann
Belgium, 46 T. & W. Farmiloe, Ld.
" 54 J. R. Francis & Co.
" 35 J. L. Lyon & Co.
Germany, 23 H. B. Alder & Co.
" 4 T. Palmer
" 63 D. Storer & Sons
" 75 Steinhoff, Sons, & Co.

Wood Pulp—
Sweden, 488 pks. W. G. Taylor & Co., Ld.
" 200 Tough & Henderson
" 250 H. Raby & Mather
" 1,172 Christophersen, Andrews, & Co.
" 135 Thames S. T. & L. Co., Ld.
" 340 J. W. Cook & Co., Ld.
" 243 W. E. Bott & Co.
" 148 M. Dk. Co.
Belgium, 1,863 G. S. N. Co.
" 2,162 J. Harrison
Holland, 78 Thames S. T. & L. Co., Ld.
Norway, 200 Becker & Co.
" 300 Johnsen & Jorgensen
" 1,108 Christophersen, Andrews, & Co.
" 62 M. Dk. Co.
Russia, 40 C. Gee & Co.
Canada, 4,580 Henderson, Craig, & Co.
" 446 A. E. Reed & Co.
" 4,253 Furness, Withy, & Co.

Zinc Chloride—
Holland, £23 Hernu, Peron, & Co.

Zinc Oxide—
Holland, 40 pks. M. Ashby, Ld.
U. States, 200 "
Germany, 500 Soundy & Sons
" 100 brls. M. Ashby, Ld.

LIVERPOOL.

Week ending September 22nd.

Acetate of Lime—
New York, 3,189 bgs.

Aluminium—
New York, 369 bxs. T. Ashbury

Bones—
Callao, 269 sks. E. Ayulo & Co.

Boracic Acid—
Leghorn, 30 cks.

Borax—
Mollendo, 4 557 sks.

Castor Oil—
Calcutta, 154 cs. Ralli Brs.
" 149

Colours—
Stettin, 25 cks. Evans, Sons & Co.

Dyestuffs—
Algarrobilla
Huasco, 600 sks. qty.
Argols
Leghorn, 1 ck.
Gutch
Singapore, 916 bxs.
Extracts
Philadelphia, 52 brls.
New York, 38 cks.
Myrabolams
Calcutta, 315 bgs.
Bombay, 1,170 W. & R. Graham & Co.
Turmeric
Calcutta, 500 bgs.

Dyestuffs (*otherwise undescribed*)
Mollendo, 349 sks. J. Schroeder & Co.

Farina—
Havre, 1,600 sks. Cunard S. S. Co. Ld.

Glucose—
Boston, 450 brls.

Glue—
New York, 5 kgs.
Hamburg, 50 bgs.

Infusorial Earth—
Hamburg, 9 bgs. 1 cs.

Mica—
New York, 7 brls.

Nitrate—
Caleta Buena, 4,733

Paint—
Hamburg, 2 brls. 2 dms.

Paraffin Scale—
New York, 322 brls. Thompson & Bedford

Phosphates—
Bona, 480 t.

Pumice Stone—
Messina, 11 cs.

Pyrites—
Huelva, 3,299 t. Matheson & Co.
" 1,777

Rosin—
Charleston, 2,021 brls.

Saltpetre—
Calcutta, 609 bgs. Ralli Brs.
Hamburg, 1 ck. 40 kgs.

Soap—
Marseilles, 60 bxs. 12 cs.
Leghorn, 25
Naples, 1 brl. P. F. Pauli
" 37
Marseilles, 7 T. W. Nicholson
" 25 Bostock & Co.

Soap Lye—
Marseilles, 10 cks. 50 dms.

Soapstone—
Bordeaux, 600 bgs. 1 cs. Geo. G. Blackwell, Sons & Co.

Soda—
Hamburg, 1 brl.

Sodium Silicate—
Philadelphia, 1 brl.

Starch—
Boston, 199 sks.
Potí, 1,850 t.
Antwerp, 682 cs.

Stearine—
Bordeaux, 85 bgs.
Antwerp, 13 J. T. Fletcher & Co.

Sulphur—
Catania, 33 cks. Allan Brs. & Co.
" { 50 t. 238 brls. / 510 bgs. 50 bls.

Tallow—
Boston, 150 tcs.
New York, 65 Armour & Co.

Tartaric Acid—
Messina, 4 cks.
Hamburg, 4

Turpentine—
Savannah, 3,285 brls.

Varnish—
Bombay, 6 cs.
Hamburg, 2 dms.

Waste Salt—
Hamburg, 724 bgs.

Wood Pulp—
Stettin, 47 bls.
New York, 18 cs. Ogdens, Ld.
" 70 Christie & Co.
Montreal, 2,791 bdls.

Zinc Oxide—
Antwerp, 47 brls.

MANCHESTER.

Week ending September 24th.

Alizarine—
Rotterdam, { 28 cks. / 4 kgs.

Ammonium Chloride—
Rotterdam, 13 cks.

Antimony Salts—
Hamburg, 2 cks.

Barytes—
Rotterdam, 250 bgs.

Caustic Potash—
Hamburg, 20 cks.

Chemicals (*otherwise undescribed*)
Hamburg, 100 cs. 34 dms.
Rotterdam, 1 ck.

Colours—
Antwerp, 17 cks. 4 pks.
Hamburg, 4

Dyestuffs (*otherwise undescribed*)
Antwerp, 12 brls.

Extracts—
Rotterdam, 10 cks.

Farina—
Rotterdam, 20 bgs.

Glue—
Antwerp, 39 bls.
Rotterdam, 85 bgs.

Lead Acetate—
Hamburg, 20 cks.
Rotterdam, 38

Limestone—
Antwerp, 2 crts. J. T. Fletcher & Co.

Litharge—
Rotterdam, 41 cks.

Lithopone—
Hamburg, 40 cks.

Ochre—
Hamburg, 5 cks.
Rotterdam, 25 bgs.
Salt—
Rotterdam, 4 cks.
Saltpetre—
Hamburg, 7 cks.
Soap—
Rotterdam, 3 cs.
Sodium Phosphate—
Antwerp, 1 ck.
Starch—
Antwerp, 200 cs.
Hamburg, 284
Tartaric Acid—
Rotterdam, { 20 kgs. / 4 cks.
Tin Chloride—
Antwerp, 19 cks.
Waste Salt—
Hamburg, qty.
Wood Pulp—
Bangor, 49,031 bls.
Gothenburg, 3,297
Hamburg, 42 400 pks.
Zinc Oxide—
Antwerp, 25 brls.

HULL.

Week ending September 24th.

Acids—
Ghent, 5 cks. Wilson, Sons, & Co., Ld.
Alumina Sulphate—
Rotterdam, 84 bgs. Hull & Netherlands S. S. Co.
Asbestos—
Rotterdam, 254 bls. Hull & Netherlands S. S. Co.
Barytes—
Antwerp, 35 cks. Bailey & Leetham, Ld.
70 bgs.
Bremen, 40 cks. G. Holmes & Co.
,, 23
Rotterdam, 57 Hull & Netherlands S. S. Co.
Chemicals *(otherwise unaescribed)*
Antwerp, 59 pks. Wilson, Sons, & Co., Ld.
Christiania, 8 cks. ,,
Hamburg, { 24 kgs. / 1 ck. ,,
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
Stettin, 10 cks. Wilson, Sons, & Co., Ld.
Colours—
Antwerp, 174 pks. Wilson, Sons, & Co., Ld.
Ghent, 31 cks. ,,
Hamburg, 3 ,,
New York, 60 brls.
Rotterdam, { 4 bxs. / 14 brls. / 43 pks. Hull & Netherlands S. S. Co.
Cream of Tartar—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Dyestuffs—
Alizarine
Rotterdam, 3 brls. 29 pks. Hull & Netherlands S. S. Co.
Dyestuffs *(otherwise undescribed)*
Antwerp, 50 bls. 50 bgs. Wilson, Sons, & Co., Ld.
Farina—
Stettin, 188 bgs. Wilson, Sons, & Co., Ld.
Glucose—
Rotterdam, 70 bgs. Hull & Netherlands S. S. Co.
Glue—
Antwerp, 40 bls. Bailey & Leetham, Ld.
,, 10 cs. Wilson, Sons, & Co., Ld.
Dunkirk, 16 cks. ,,
Rouen, 4 Rawson & Robinson
Kaolin—
Dunkirk, 42 bgs. Wilson, Sons, & Co., Ld.
Lead Acetate—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.
Nickel Salts—
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
Ochre—
Bremen, 2 cks. Blundell, Spence, & Co.
Paint—
Amsterdam, 1 dm.
Paraffin Wax—
New York, 100 bgs. Wilson, Sons, & Co., Ld.
Phosphates—
Dunkirk, { 1,730 bgs. / 240 t.
Potash—
Dunkirk, 6 dms. Wilson, Sons, & Co., Ld.
Pyrites (Residus)—
Rouen, 1 cs.
Soap—
New York, 75 pks. Wilson, Sons, & Co., Ld.
Soda—
Ghent, 220 bgs. Wilson, Sons, & Co., Ld
Starch—
Amsterdam, 160 cs. Hull & Netherlands S. S Co.
Antwerp, 120 Bailey & Leetham, Ld.
Bremen, 153 Veltmann & Co.
Ghent, 249 Wilson, Sons, & Co., Ld.
Tallow—
Antwerp, 5 bgs. Wilson, Sons, & Co., Ld.
Boston, { 660 tcs. / 65 brls. ,,
New York, { 85 tcs. / 630 brls. ,,
Tar—
Stockholm, 110 brls. Wilson, Sons, & Co., Ld.
Tartar—
Bordeaux, 4 cks.
Tartaric Acid—
Rotterdam, 6 cks. Hull & Netherlands S. S. Co
Turpentine—
Savannah, 2,775 brls. Runton Brs.
Waste Salt—
Hamburg, { 750 bgs. / 150 t.
White Lead—
Antwerp, 23 cks. Bailey & Leetham, Ld.
Rotterdam, 91 Hull & Netherlands S. S. Co.
Wood Pulp—
Bergen, 117 pks. Wilson, Sons, & Co., Ld.
Boston, 2 bls.
Christiania, { 40 cs. / 1 268 bls. ,,
Gothenburg, 2,675 ,,
Zinc Chloride—
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.
Zinc Oxide—
Antwerp, 30 cks. Bailey & Leetham, Ld.
,, 10 brls. Wilson, Sons, & Co., Ld.
Zinc White—
Amsterdam, 13 cks. Hull & Netherlands S. S. Co.
Rotterdam, 50 ,,

GLASGOW.

Week ending September 29th.

Acetate of Lime—
Philadelphia, 290 bgs.
Acetic Acid—
Rotterdam, 7 cks. J. Rankine & Son
20 carbys
Ammonium Sulphate—
Rotterdam, 76 cks. J. Rankine & Son
Barium Chloride—
Rotterdam, 4 cks. J. Rankine & Son
Barytes—
Rotterdam, 52 pks. J. Rankine & Son
Bleaching Powder—
Hamburg, 66 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 2 cks. 1 cs.
Colours—
Rotterdam, 52 pks. J. Rankine & Son
Hamburg, 1 ck.
Cottonseed Oil—
New York, 202 brls.
Dyestuffs—
Alizarine
Rotterdam, 22 cks. J. Rankine
1 brl. & Son
Aniline
Rotterdam, 10 bxs. J. Rankine & Son
Amsterdam, 1 ck.
Hamburg, 1 cs.
Amsterdam, 1 cs. J. Rankine & Son
Aniline Colours
Hamburg, 2 cs.
Extracts
Antwerp, 1 ck.
Fiume, 204 brls.
New York, 5 kgs. 4 brls.
Shumac
Marseilles, 50 bgs.
French Chalk—
Fiume, 50 bgs. Robertson, M'Intosh & Co.
Glucose—
New York, 250 brls.
Baltimore, 100
Santander, 50
Glue—
Rotterdam, 20 bgs. J. Rankine
Fiume, 60
New York, 97 brls.
Iron Oxide—
Montreal, 30 kgs.
New York, 1 brl.
Lead Acetate—
Hamburg, 23 cks.
Molasses—
New York, 550 brls.
Nickel Salts—
New York, 1 brl.
Oxalic Acid—
Hamburg, 5 cks.
Phosphates—
Antwerp, 200 bgs.
Rosin—
Santander, 500 brls.
New York, 900
Saltpetre—
Hamburg, 5 cks.
Soap—
Marseilles, 30 cks. 20 dms.
Fiume, 20 cs. W. Bunten & Co.
,, 27 T. Hinshelwood & Co.
,, 80 G. Hayes & Co.
,, 27 G. & J. Boyd
,, 11 Henderson, Hogg & Co.
Sodium Sulphate—
Antwerp, 16 cks.
Starch—
Philadelphia, 250 bgs.
Antwerp, 30
Fiume, 150 J. Anderson & Co.
,, 5 J. Angus
,, 5 Gi;mour & Co.
,, qty.
Tallow—
New York, 43 tcs.
Rotterdam, 33 bgs. J. Rankine & Son
Varnish—
Antwerp, 2 cks.
Waste Salt—
Hamburg, 1,063 bgs. 00 t.
White Lead—
Rotterdam, 40 pks. J. Rankine & Son
Wood Pulp—
Christiania, 2,209 bls.
Hamburg, 75 reels
Zinc Oxide—
New York, 100 brls.

TYNE.

Week ending September 24th.

Alum Earth—
Hamburg, 166 cks. Tyne S. S. Co.
Antimony—
Hamburg, 212 cs. Tyne S. S. Co.
Barytes—
Rotterdam, 100 bgs. Tyne S. S. Co.
Glucose—
New York, 150 brls. Fume
250 pks. Withy, & Co
Limestone—
Antwerp, 8 crts. Tyne S. S. Co
Pitch—
Archangel, 400 cks.
Soap—
Rotterdam, 4 cs. Tyne S. S. Co
Starch—
Antwerp, 100 cs. Tyne S. S. Co
Rotterdam, 230 ,,
Stearine—
Rotterdam, 14 bgs. Tyne S. S. Co
Tar—
Archangel, 1,015 brls.
Tar Oil—
Archangel, 186 brls.
Wood Pulp—
Christiania, 360 bls. P.
Matthiessen & C

GOOLE.

Week ending September 21st.

Alizarine—
Rotterdam, 68 brls. 3 cs.
Alkali—
Calais, 2 cks.
Antimony—
Boulogne, 1 ck.
Barytes—
Antwerp, 100 bgs.
Caoutchouc—
Boulogne, 17 cks.
Chemicals *(otherwise undescribe*
Hamburg, 12 cs.
Colours—
Boulogne, 1 ck.
Hamburg, 9
Dyestuffs *(otherwise undescribe*
Amsterdam, 1 cs.
Antwerp, 585 bgs.
Boulogne, 29 cks. 2
Ghent, 146 bgs.
Rotterdam, 387 cks. 94
Farina—
Hamburg, 100 bgs.
Glue—
Antwerp, 2 bs.
Indigo—
Rotterdam, 13 brls.
Logwood—
Belize, 560 t.
Hayti, 586
Phosphates—
Ghent, 800 bgs.
Potash—
Calais, 16 dms
Dunkirk, 60
Rotterdam, 4 cks.
Saltpetre—
Hamburg, 15 cks.
Rotterdam, 100 bgs.
Starch—
Ghent, 219 bxs.
Waste Salt—
Hamburg, 500 bgs.

GRIMSBY.

Week ending September 24th

Barium Chlorate—
Hamburg, 5 cs.
Barytes—
Antwerp, 40 bgs.
Hamburg, 30 cks.
Rotterdam, 50 bgs.
Caoutchouc—
Antwerp, 1 cs.
Hamburg, 5
Rotterdam, 1
Chemicals *(otherwise undescrib*
Hamburg, 2 cs.
Colours—
Antwerp, 25 cks. 4 cs. 61 pks
Hamburg, 37 9 65
Rotterdam, 2
Farina—
Hamburg, 50 bgs.
Tartar Emetic—
Hamburg, 5 cks.
Varnish—
Antwerp, 1 pk.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

ending September 28th.

ad,		3 cs.		£15
n,		10		20
y,		6		10
			10 pks.	28
izabeth,			17	33
ork,	10 t.	2 c.		£131
ntle,	2 t.			£12
nia—				
ama,	20 cks.			£94
nai,			2 dms.	40
n,			5 pks.	15
nium Carbonate—				
	5 t.	10 c.		£130
rp,	12 cks.			30
ara,		4		11
y,		5 cs.		8
ie,	2 t.	6 c.		58
	2	6		58
ersburg,	5			130
nium Chloride—				
		11 c.		£18
urne,		15		11
nium Sulphate—				
m,	50 t.			£475
s,	3	2 c.		35
urg,	50			500
c—				
ama,	20 kgs.			£18
Slag—				
Town,	538 t.	6 c.		£901
ing Powder—				
n,	3 t.			£31
—				
s,		15 c.		£36
dam,	50 cks.			75
y,	1 t.	2		14
ic Acid Gas—				
el Is.,	31 tubes			£12
c Potash—				
ta,		2 c.		£7
c Soda—				
izabeth,	1 t.	1 c.		£21
uver,	8	14		72
ore,	5	4		44
n,		5		9
r,	5	4		37
an pton,		3		5
urne,	1			15
bury,		14		16
anui,	5			50
,	6	19		51
		5		8
ndon,	1	6		31
cals *(otherwise undescribed)*				
gton,	20 pks. (pt.)		2 pks.	£41
and,	53			69
n,	7			17
eim,	49 cks.			63
de,	40 pks. (pt.)			43
urg,	25 cks.		43	438
bo,		3 cs.		30
gue,	2		7	87
ls,	3	2		106
	5 kgs.			
dorf,	5			30
res,			12	35
n,		3		12
r,	13			14
ndon,	35 cks.		57	24
	6 kgs.			35
dam,	25			150
urne,	20 pks. (pt.)			65
y,	58	2 cs.	7	111
ork,	15 brls.	14	31	504
ta,		8		27
rk,	15 cks.			250
rp,	13			200
ia Bay,		40		95
sberg,	3			65
	119 pks. (pt.)			242
s,	30 kgs.		30 dms.	39
Acid—				
n,		2 c.		£15
ay,		3		24
		10		64
ne,		1		8
		1		8
gton,		2		13
s,		1		7
lu,		3		20
Pt. Elizabeth,		1		7
Madras,		2		14
Colombo,		1		7
Coal Products—				
Alizarine				
Lisbon,	2 kgs.			£9
Aniline				
Sydney,		2 cs.		£14
Aniline Oil				
New York,	60 dms.			£1,720
Anthracene				
Cologne,	360 cks.			£669
Benzol				
Le Treport,	48 cks.			£121
Boulogne,	11 t.			132
Antwerp,	12 dms.			84
Yokohama,	16	2 cs.		19
Wellington,	8			8
Carbolic Acid				
Cologne,	97 cks.			£497
Dusseldorf,	80			601
Philadelphia,	10			78
New York,	16 cks.	4 cs.	50 dms.	234
Dyes				
Boston,	13 pks.			£191
Naphtha				
Dunedin,	10 dms.			£12
Naphthaline				
Rotterdam,	36 bgs.			£7
Dusseldorf,	500 cks.			244
Hamburg,	5			5
Yokohama,	5	2 crts.		3
Pitch				
Hamburg,	104 cks.	60 brls.		£288
Philadelphia,	250			86
Montreal,	385			113
Boston,	300			156
Antwerp,	230 t.			252
Hochfeld,	270			374
Rio de Janeiro,	20 rnlts.			9
Pitch and Tar				
Hong Kong,	153 brls.			£169
Galatz,	150 cks.			61
Tar				
Calcutta,	110 rnlts.			£94
Singapore,	33 cks.			56
Auckland,			20 dms.	8
Hamburg,	154 brls.			66
Cologne,	150			94
Durban,			70	6
Brussels,	2	10		14
Toluol				
Hamburg,	3 cks.			£46
Copper Sulphate—				
Colombo,	1 t.	2 c.		£21
Brisbane,		10		9
Galatz,		8		6
Cream of Tartar—				
Fremantle,		13 c.		£46
Cairns,		8		30
Bunbury,		4		12
Yokohama,		10		41
Canterbury,		10		38
Auckland,		9		36
Wellington,		5		19
Cyanogen Bromide—				
Fremantle,		10 cs.		£97
Disinfectants—				
Durban,	100 dms.	18 cs.	30 pks.	£96
Madras,			18	21
Fremantle,		6		15
Hong Kong,	5 cks.		160 dms.	53
Cape Town,	100			35
Melbourne,		30		63
Alexandria,		4		15
Hamburg,	15			75
Penang,			200	65
Calcutta,			391 pks.	65
Glycerine—				
New York,	92 dms.			£1,370
Manure—				
Paris,	25 t.			£75
Bordeaux,	53			280
Pt. Elizabeth,	4	9 c.		45
Auckland,	102			385
Madras,	1	11		50
Trinidad,	5	3		78
Nitric Acid—				
Channel Is.,	49 carbys			£82
Oxygen—				
Amsterdam,		1 cs.		£55
Phosphates—				
Treport,	20 t.			£115
Rouen,	25			145
Phosphoric Acid—				
Demerara,	11 t	3 c.		£132
Phosphorus (Amorph)—				
Lisbon,		6 cs.		£58
Potash—				
Hiogo,		10 c.		£30
Potassium Bichromate—				
Stettin,		7 c.		£10
Calcutta,	1 t.	11		50
Potassium Carbonate—				
La Plata,		16 c.		£21
Potassium Cyanide—				
Genoa,	1 t.			£110
Madras,		4 cs.		19
Calcutta,		5		23
Melbourne,	9			1,097
Pt. Darwin,	5	10 c.		429
Toronto,		3		12
Adelaide,	1	10		150
Sydney,		27 cs.		320
New York,		300		1,456
Potassium Permanganate—				
Singapore,		10 c.		£31
Potassium Prussiate—				
New York,	69 cks.			£1,167
Rotterdam,	15			324
Toronto,		5 c.		16
Salt Cake—				
Ghent,	145 t.	4 c.		£160
Saltpetre—				
Oporto,	2 t.	5 c.		£41
Canterbury,		10		10
Nelson,		5		5
Melbourne,	2	42		42
Sydney,	1			21
Sheep Dip—				
Cape Town,	3 t.	15 c.		£143
Wanganui,		210 cs.		368
Wellington,	35	660		2,207
		1 c.		
Blenheim,	9	12		338
		25 cs.		
Christchurch,	35	19 c.		937
B. Ayres,		2,900 cs	450 ckr.	7,526
Antwerp,		1,250		1,463
Napier,		200		375
M. Video,	5 t.	12 c.		125
Soda—				
Bombay,		10 c.		£10
Rotterdam,	5 t.	9		30
Bunbury,	1			8
Soda Salts—				
New York,		3 cs.		£34
Soda Crystals—				
Cape Town,	4 t.	1 c.		£12
Sodium Bicarbonate—				
Bombay,	1 t.			£12
Pelotas,	2			18
Fremantle,	10			70
Pt. Elizabeth,		10 c.		6
Durban,	1			5
Napier,	2			11
Nelson,	1			6
Vancouver,	2			15
Sodium Hyposulphite—				
Singapore,	5 t.	2 c.		£33
Sodium Sulphate—				
Ghent,	50 t.			£75
Sodium Sulphite—				
Melbourne,	1 t.			£46
Sodium Tartrate—				
Melbourne,		5 c.		£16
Sulphuric Acid—				
E. London,		20 cs.		£13
Calcutta,		10		16
Antwerp,		25		19
Penang,		20		50
Durban,		14		14
Superphosphates—				
Morlaix,	135 t.			£335
Auckland,	100			300
Tartaric Acid—				
Melbourne,		5 c.		£27
Bombay,		3		20
Brisbane,		1		8
Yokohama,		9		51
Napier,	2 kgs.			11
Fremantle,		15		82
Wellington,		3		17

LIVERPOOL.

Week ending September 28th.

Alkali—				
New York,	2 t.		2 q.	£8
Antwerp,		6 c.	2	2
Braila,	4			16
Salonica,	6	5	1	25
Piræus,	10			40
Galatz,	15			70
Smyrna,	15	16	1	65
Genoa,	88			435
Adelaide,	20	10		85
Montreal,	4	14		20
B. Ayres,	3	4		13
Rio de Janeiro,	30			120
Valencia,	98	19		435
Alum—				
Fremantle,		10 c.		£3
Oporto,		9	2 q.	2
Rio de Janeiro,	2 t.	17	1	16
Bahia,	2	5	3	12
Salahora,	1		3	5
Syra,	2	17	3	14
Melbourne,	2	4		11
Aluminoferric—				
Kingston, Ont.,	10 t.	7 c.	3 q.	£28
Ammonium Carbonate—				
New Fairwater,	2 t.	2 c.		£66
Ibrail,	1			27
Pernambuco,		9		9
Sydney,	1			30
Libau,		10		14
Vigo,		15	2 q.	22
Melbourne,		4		6
Genoa'	1	3		28
Marseilles,	1	2	3	36
Ammonium Chloride—				
Alexandria,	6 t.			£99
Piræus,		6 c.		9
Melbourne,	1			18
Montreal,	2			36
Trieste,	1			20
Syra,		15		23
Ammonium Sulphate—				
Valencia,	10 t			£100
Barcelona,	1	18 c.		20
Gd. Canary,	14			155
New York,	25	10		255
Malaga,	19	19	1 q.	200
Genoa,	60	13		604
Bordeaux,	10			100
Honululu,	454	18		4 548
Basic Slag—				
Nantes,	98 t.	8 c.		£246
Palermo,	49			74
Venice.	930			1,455
Bleaching Powder—				
Baltimore,	56 cks.			
Bilbao,	28			
Bombay,	15	20 cs		
Boston,	511			
B. Ayres,	4			
Calcutta,		110		
Genoa,	169		30 pks.	
Leghorn,	78			
Lisbon,		20		
Melbourne,	25			
Montreal,	27			
Nantes,	15			
Naples,	35			
New York,	189			
Philadelphia,	164			
Sydney,		35 brls.		
Boracic Acid—				
Rotterdam		12 c.		£16
Havana,		4	2 q.	6
Toronto,	1 t.		1	27
Halifax,		3		4
Borax—				
Vera Cruz,	1 t.	3 c.	2 q.	£14
Antwerp,	1	10		23
Rotterdam,	1	10	3	22
Stettin,	1	1		15
Toronto,	11	19	3	180
Halifax,	1		2	15
Genoa,	5	3		67
St. John, N.B.,	1		2	15
Carbolic Acid—				
Bombay,	5 t.			£63
New York,	2	12 c.	1 q.	191
Hamburg,	1	1	1	67
Caustic Potash—				
Barcelona,	1 t.	19 c.		£59
Caustic Soda—				
Algoa Bay,		52 cs.		
Antwerp,	99 dms.			
Barcelona,	120		692 pks.	
Bilbao,	16			
Bombay,	20			
Bordeaux,	15			
Boston,	50			

B. Ayres, 245 20 kgs.
Cadiz, 20 brls.
Calcutta, 40
Ceara, 30
Cincinnati, 50
Cartagena, 10
Coquimbo, 10
Cumano, 15
Corral, 13 bxs.
Delagoa Bay, 356 cs.
Dunkirk, 30
E. London, 11
Fairwater, 267
Galatz, 918
Genoa, 230
Hamburg, 92
Havre, 25
Helsingfors, 20
Hiogo, 880
Johannesburg, 30
La Guayra, 15
Leghorn, 20
Lisbon, 15
London, 60
Louisville, 100
Madeira, 5
Malta, 22
Marseilles, 171
Messina, 40
M. Video, 55
Nagaski, 260
Naples, 31
Nantes, 60
New York, 15 150 brls.
Odessa, 200
Oporto, 63
Para, 30
Parangua, 10
Pernambuco, 130
Pt. Natal, 19 cs.
Rotterdam, 24
San Antonio, 50
Sao Paulo, 20
Stettin, 68
Sydney, 108
Tampico, 35
Tarragona, 80
Trieste, 43
Vera Cruz, 10

Chemicals *(otherwise undescribed)*
Kingston, Jam., 1 cs. £7
Naples, 2 cks. 16
Ancona, 2 17
Madras, 1 t. 4 c. 43
Bombay, 75 brls. 353
Philadelphia, 13 355
Odessa, 3 72
B. Ayres, 3 7

China Clay—
Barcelona, 150 bgs.
Bombay, 210 cks.
Boston, 1,804
Rio de Janeiro, 32
Vera Cruz, 50

Citric Acid—
Wellington, N.Z. 1 c. £6

Coal Products—
Aniline Salts
Madras 13 cs.
Smyrna, 29 cks.
Syra, 4 1 bl.
Creosote
Vera Cruz, 17 cks.
Creosote Oil
Bordeaux, 125 cks.
Pitch
Antwerp, 100 t.
Tar
B. Ayres, 100 brls.
Guayaquil, 80 dms.
Santos, { 10½ / 5

Copperas—
Rabat, 2 t. 12 c. £6
Samarang, 12 2 3 q. 31

Copper Sulphate—
Nantes, 20 t. 8 c. 2 q. £347
Kingston, Jam., 1 5 22
Malaga, 25 1 433
Ghent, 5 3 81
Bordeaux, 4 18 79
B. Ayres, qty. 7 8 1 124
Naples, 3 16 3 60
Delhi, 4 18 80
Galatz, 1 9 3 22
Smyrna, 1 4 3 20
M. Video, 10 12 1 171
Volo, 4 3 4
St. John's, Nfd., 1 9 3 24
Ibrail, 2 33
Genoa, 5 1 2 81
Melbourne, 20 332

Dextrine—
Madras, 6 c. 2 q. £7

Disinfectants—
Singapore, 8 c. 1 q. £19
Toronto, 5 14
Manila, 3 1 q. 5

Dyestuffs—
Alizarine
Samsoun, 30 kgs.
Aniline Colours
Boston, 10 kgs.
New York, 1
Valleyfield, 2 brls.
Extracts
Bahia, 1 cs.
Barcelona, 28 cks.
Boston, 50
New York, 35
Logwood
Petona, 134 sks.

Dyestuffs *(otherwise undescribed)*
Sydney, 10 pks.

Glycerine—
Sydney, 4 t. £240
Montreal, 9 8 c. 1 q. 362
Adelaide, 2 120
Madras, 2 2 4
Hiogo, 90 270
Yokohama, 80 240

Iron Oxide—
Antwerp, 4 c. £10

Lead Acetate—
Santos, 6 c. 3 q. £13

Magnesia—
Havana, 6 cs. £291
Messina, 10

Magnesium Chloride—
Genoa, 17 t. 18 c. 3 q. £49

Magnesium Sulphate—
Rio de Janeiro, 200 kgs.

Manure—
Las Palmas, 1 t. £7
Marseilles, 15 1 c. 2 q. 60
Landerneau, 54 3 3 244

Oxalic Acid—
Montreal, 2 t. 2 c. 3 q. £57

Paint—
Bathurst, 65 kgs.
Beyrout, 25 1 ck.
Buenaventura, 12
B. Ayres, 11 cks. 80 cs.
Caiffa, 10 brls.
Callao, 10 dms.
Cape Haite, 2
Constantinople, 134 pks.
Hamburg, 20 kgs.
Jeremie, 4 cks.
Lagos, 116 kgs.
Lattaquie, 12
Melbourne, 20 dms.
Mollendo, 5 cks. 15 cs.
Nassau, 91 pks.
Porto Plata, 16 brls.
Punta Arenas 565 kgs.
Rotterdam, 27 28 tins 4 dms.
San Domingo, 30 18
Santos, 8 cks. 25
Sierra Leonne, 80 kgs.
Tuticorin, 10
Valparaiso, 480
Yloilo, 255 cks.

Painters' Colours—
Baltimore, 3 cks. 100 brls.
Bassam, 39 pks.
B. Ayres, 6 kgs. 36 cs.
Elomina, 23
Lahou, 24
Madras, 20 brls.
Manoas, 9 cks.
New York, 1
Rio de Janeiro, 31
Valencia, 2 65 kgs.
Valparaiso, 100

Paraffin Wax—
Palermo, 15 bgs.
Rio de Janeiro, 6 cs.
Rouen, 10
Salonica, 20

Phosphorus—
Hiogo, 6 t. 5 c. £1,271
Hong Kong, 5 55
Shanghai, 10 83

Potash Salts—
N. Orleans, 6 t. £536

Potassium Bicarbonate—
New York, 4 t. 7 c. 2 q. £118

Potassium Bichromate—
Oporto, 15 c. £24
Rio de Janeiro, 1 t. 14 1 q. 54
Smyrna, 18 27
Toronto, 1 15 3 58

Potassium Chlorate—
Genoa, 3 t. £90
Hamburg, 2 10 c. 75
Havana, 15 22
Libau, 5 150
Naples, 1 30
Newfairwater, 10 15
New York, 10 296
Stockholm, 9 16 307
Vera Cruz, 1 30

Potassium Cyanide—
Tampico, 10 c. £55

Potassium Prussiate—
Calcutta, 7 c. 1 q. £24

Salt—
Akassa, 300 t. 19 c.
Algoa Bay, 10
Amsterdam, 190
Baltimore, 135
Barbadoes, 300 bgs.
Bata, 600 t.
Bonny, 292
Boston, 200
B. Ayres, 50
Calcutta, 8,802 50 cs.
Cameroons, 50 4 c.
Ewanga, 1,000 bgs.
Ghent, 150 t.
Gd. Bassa, 262
Gd. Lahou, 1,800 bgs.
Harlingen, 450 t.
Iceland, 105
Montreal, 1,422 8 9,825 sks.
New Plymouth, 60
Newport News, 50
Old Calabar, 100 bgs.
Pensacola, 500 t.
Punta Gorda, 200 bgs.
Rangoon, 3,168 t.
Rio de Janeiro, 200 cs.
Rosario, 40
St. Petersburg, 322
Sydney, 100 2,000
Thorsbaven, 121 tcs.
Wellington, 255 cks.

Salt Cake—
Antwerp, 253 t. £253
Baltimore, 100 3 c. 162
Leghorn, 150 294
Lisbon, 60 100

Saltpetre—
Malta, 3 c. £5
Pernambuco, 1 t. 8 2 q. 30

Sheep Dip—
B. Ayres, 27 t. 16 c. £786
M. Video, 250 dms. 65
Owen Sound, 15 cks. 75

Soap—
Auckland, 13 bxs.
Algoa Bay, 600 50 cs.
Axim, 250
Baltimore, 25
Bathurst, 1,000
Belize, 500
Bombay, 920 5
Boston, 25 brls.
Bulwayo, 5 cs.
Calcutta, 283
Canaria, 450
C. C. Castle, 224
Cape Town, 1,260 1,234
Cartagena, 1
Colombo, 8
Constantinople, 202
Curacao, 226
Delagoa Bay, 1,152
Durban, 60
E. London, 20 5 pks.
Fremantle, 1,700
Galata, 20
Geneva, 240
Genoa, 40
Gibraltar, 512
Grenada, 165
Guayaquil, 450
Hamburg, 50
Johannesburg, 60
Karachi, 500
Kama, 20
Lagos, 100
Lanzarote, 25
Lucea, 25
Madras, 12
Malta, 40
Mauritius, 700
Monrovia, 27
Montego Bay, 500
Montreal, 10
New Plymouth, 2 tnks.
New York, 36
Palma, 336
Penang, 10
Pt. Elizabeth, 500
Pt. Natal, 2,225 10
Pt. Said, 3
Rangoon, 4 crts.
Rotterdam, 300 212
St. John's, 105 1
St. Thomas, 2
Salonica, 9
Salt Pond, 60
Sierra Leone, 1,402
Singapore, 365
Smyrna, 7
Tangiers, 70
Teneriffe, 1,346
Warri, 500
Yloilo, 52

Soap Lye—
New York, 246 dms.

Soda Ash—
Barcelona, 30 cks.
Boston, 640 bgs. 71
B. Ayres, { 2,160 / 125 brls. } 319
Copenhagen, 200
Culmar, 23
Dunedin, 33
Fiume, 100
Gefle, 35
Genoa, 119 pks.
Hamburg, 76 cks.
Helsingborg, 100
Helsingfors, 16
Libau, 290
Montreal, 100 kgs.
New York, { 19 tcs. / 100 bgs. 182 }
Oporto, 25
Rio de Janeiro, 50 brls.
Smyrna, 693
Stettin, 1,190
Sydney, 469

Soda Crystals—
Barcelona, 10 cks.
B. Ayres, 100 kgs.
Genoa, 30
Gibraltar, 30 cs.
Malta, 50 bgs. 51 brls.
Montreal, 145 pks.
Shanghai, 10 cks.
Smyrna, 25
Trinidad, 34

Sodium Bicarbonate—
Algoa Bay, { 20 bgs. / 70 kgs. }
Ancona, 50 2 cks.
Antwerp, 10
Barcelona, 60
Batavia, 10
Boston, 75
Bordeaux, 80
B. Ayres, 34 25
Calcutta, 350
Catania, 60
Colombo, 15 10
Copenhagen, 20
Danzig, 27 pks.
Dunedin, 50
E. London, 150
Genoa, 60 20
Gibraltar, 12 bgs.
Honolulu, 70
Leghorn, 100
Malta, 12 dms.
Marseilles, 65 kgs.
Mexico City, 100 bgs.
Messina, 40 kgs.
Mombassa, 30
Montreal, 156 pks.
Nantes, 141
Palermo, 23
Piræus, 20
Rangoon, 80
Rio de Janeiro, 20
Rotterdam, 20
Samarang, 5 cks.
Sourabaya, 30
Sydney, 234
Varna, 30
Vigo, 8

Sodium Chlorate—
Gutujewski, 650 kgs.
Rotterdam, 100

Sodium Fluoride—
Stettin, 154 bgs.

Sodium Hyposulphate—
Antofagasta, 30 cks.

Sodium Oxide—
Trieste, 5 cs.

Sodium Sulphate—
Montreal, 26 pks.
Sydney, 1 kg.

Sulphur—
Boston, 125 t. 5 c.
Calcutta, 6
Ghent, 7

Superphosphates—
Adelaide, 392 t. 2 c.
Genoa, 138 4 2 q.
Gd. Canary, 4
Landerneau, 123 7 3
Marseilles, 40
Teneriffe, 19
Valencia, 114 19 3

5 cks 50 cs.
12 pks.
1 dm.
3 cs.

ad—
2 cks.

ride—
1 t. 5 c. £16
16 10

CHESTER.

ding September 28th.

45 brls.

m Chloride—
19 brls.

olours—
1 ck.

Powder—
15 cs.

oda—
10 dms.

(otherwise undescribed)
10 cks.

ucts—
Oil
1 dm.
10 tins 10

Salts
20 cks.

ylamine
d, 28 cks.

193 t. 17 c.

28 dms.

50 brls.
35

ants—
1 cs.

5 crbys. 12 dms.

il—
5 brls.

id—
4 cs.

8 cks. 105 dms.
9

Colours—
2 brls.
5 cks.

Wax—
15 cs.
150

ichromate—
8 cs.

12 cs.
27
3

aphthionate—
29 cks.

licate—
20 brls.

Acid—
8 cs.

31 cks.
2 cs.

e—
1 brl. 1 dm.

HULL.

ding September 24th.

m Sulphate—
135 bgs.
299
275

160 t.

Powder—
18 cks.

(otherwise undescribed)
24 cks. 2 cs.
4
13 2
8 1,312 slbs.
77
200 pks.
3 2
15 145

Helsingfors, 28 11 1
New York, 10
Odessa, 200
Rotterdam, 14 130 10
St. Petersburg, 11 60
Stettin, 86
Trieste, 53
Venice, 20
Wyburg, 15

Colours—
Boston, 50 kgs.

Cottonseed Oil—
Antwerp, 2,054 c.
Copenhagen, 86
Gothenburg, 100
Hamburg, 455
Harlingen, 103
Rotterdam, 1,186

Dyestuffs *(otherwise undes.)*—
Amsterdam, 43 cks.
Constantinople, 10
St. Petersburg, 12

Linseed Oil—
Christiania, 103 c.
Drontheim, 130
Trieste, 24

Manure—
Dunkirk, 80 t.

Ochre—
Stettin, 100 cks.

Painters' Colours—
Amsterdam, 20 cks.
Antwerp, 8 5 cs. 10 dms.
Bergen, 1
Christiania, 15 1 52
Constantinople, 1
Copenhagen, 37
Danzig, 30
Gothenburg, 6 3 pks. 2 dms.
Hamburg, 26 2
Helsingfors, 30 44
Konigsberg, 2
New York, 25
Rotterdam, 28 1
St. Petersburg, 50
Stockholm, 10
Stettin, 41 20 pks.
Venice, 24

Pitch—
Antwerp, 284 t.

Slag—
Drontheim, 150 t.
Venice, 642

Slag Meal—
Gothenburg, 2,032 bgs.

Soap—
Amsterdam, 183 cs.
Drontheim, 83
Ghent, 52
St. Petersburg, 4 cks. 12

Starch—
Christiania, 5 sks.

Sulphur—
Stettin, 30 t.

Tallow—
Odessa, 27 cks.

Tar—
Dunkirk, 20 cks.
Hamburg, 17
Stettin, 5

Varnish—
Antwerp, 3 cs.
Gothenburg, 3 dms.
Rotterdam, 2 cks. 2
St. Petersburg, 4
Stockholm, 2 1
Stettin, 2

Whiting—
Hamburg, 20 bgs.
Rotterdam, 4 cks.

GLASGOW.

Week ending September 29th.

Boracic Acid—
Melbourne, £184
Sydney, £39 16s.

Carbolic Acid—
Rotterdam, £200

Chemicals *(otherwise undescribed)*
Christiania, £10

Coal Products—
Creosote Oil
France, 400 t. 16 c.
Russia, £275
Pitch
Canada, £79
Danzig, 110 t. 10 c.
Hamburg, 11 15

Tar
Canada, £50
Danzig, 302
Madras, £44 10s.
Russia, £250
St. Petersburg, 1,000

Extracts—
Canada, £751 9s.

Glucose—
Christiania, 1 t. 8 c.

Lead Acetate—
Montreal, £122

Linseed Oil—
Arequipa, 4 t. 16¼ c.
Canada, 5 2
Kingston, 8 9¾

Logwood—
Canada, £123
Portugal, £29 14s.

Magnesia—
Melbourne, £70

Paint—
Christiania, £19
St. John's, N'fld., 35

Painters' Colours—
Colombo, £32
Lima 73
Madras, 155
Pt. Said, 57
Singapore, 136
St. John's, N'fd., 86
Sydney, 746
Turkey in Europe, £36 12s.
U.S.A., £68

Paraffin Wax—
Italy, £145
Russia, 420

Potassium Bichromate—
Christiania, £121
Hiogo, 163

Potassium Cyanide—
Madras, £458
Sydney, £33 12s.
Valparaiso, £239

Soap—
Cape Colony, 2 t. 10 c.
Colombo, 2 9¼
Shanghai, 2 10

Sulphuric Acid—
Colombo, £37 10s.
Madras, £75

Varnish—
Christiania, £2
Sydney, £69 14s.

Waste Salt—
U.S.A., 50 t.

TYNE.

Week ending September 24th.

Alkali—
Amsterdam, 6 t. 16 c
Copenhagen, 1 13
Riga, 10 8
Rotterdam, 6 18

Ammonia—
Fray Bentos, 16 c.

Ammonium Carbonate—
Randers, 17 c.

Antimony—
Hamburg, 1 t.
Rotterdam, 5 10 c.

Barium Binoxide—
Rotterdam, 7 t. 14 c.

Barium Carbonate—
Copenhagen, 3 t.

Bleaching Powder—
Amsterdam, 23 t. 14 c.
Antwerp, 5 12
Hamburg, 28 18
Riga, 16 8
Rotterdam, 26 3

Bone Grease—
Genoa, 15 t. 3 c.

Calcium Chloride—
Fray Bentos, 10 t. 15 c.

Carbolic Acid—
Bergen, 2 c.

Caustic Soda—
Amsterdam, 5 t. 10 c.
Antwerp, 4 16
Barcelona, 12 18
Copenhagen, 1 3
Fray Bentos, 1 10
Reval, 20 1

Fluor Spar—
New York, 30 t. 12 c.

Glue—
Fray Bentos, 3 c.

Linseed Oil—
Fray Bentos, 300 gls.

Litharge—
Antwerp, 1 t. 3 c.
Lisbon, 1 8
Odessa, 3 2
Riga, 5

Magnesia—
Barcelona, 6 t. 19 c.
Genoa, 17
Lisbon, 13
Odense, 9

Naphthaline—
Riga, 27 t. 19 c.

Ochre—
Fray Bentos, 17 c.

Paint—
Antwerp, 2 t. 14 c.
Copenhagen, 4
Fray Bentos, 2 18
Rotterdam, 10

Saltpetre—
Fray Bentos, 4 3 c.

Soda—
Fray Bentos, 4 c.

Soda—
Amsterdam, 10 t.
Batoum, 1
Fray Bentos, 1 3 c.
Genoa, 5
Rotterdam, 25 13

Soda Ash—
Genoa, 11 t.

Sodium Sulphate—
Sando, 260 t.

Tar—
Fray Bentos, 2 9 c.

Turpentine—
Fray Bentos, 400 gls.

Varnish—
Fray Bentos, 5 c.

White Lead—
New York, 2 t. 10 c.

Whiting—
Fray Bentos, 16 c.

Witherite—
Riga, 20 t. 19 c.

GOOLE.

Week ending September 21st.

Chemicals *(otherwise undescribed)*
Hamburg, 15 cks.

Coal Products *(otherwise undes.)*—
Amsterdam, 24 cks.
Boulogne, 26 2 cs. 5 tins
Ghent, 2
Rotterdam, 8

Dyestuffs *(otherwise undescribed)*
Hamburg, 21 cks.
Rotterdam, 7

Manure—
Ghent, 77 bgs.

Myrabolams—
Hamburg, 3,198 bgs.

Painters' Colours—
Amsterdam, 2 cks.
Bruges, 8 dms.
Hamburg, 1 cs.

Pitch—
Antwerp, 609 t.

GRIMSBY.

Week ending September 24th.

Alkali—
Hamburg, 21 cs.

Caoutchouc—
Gothenburg, 1 cs.
Malmo, 2 bs.

Chemicals *(otherwise undescribed)*
Dieppe, 5 cks. 8 cs.

Coal Products *(otherwise undes.)*—
Dieppe, 56 cks. 1 cs.
Rotterdam, 12 btls.

Colours—
Malmo, 33 cks.

Manure—
Esbjerg, 5,090 bgs.

Painters' Colours—
Antwerp, 5 cks. 4 crts. 2 pks.
Hamburg, 1 2 cs.
Rotterdam, 2

PRICES CURRENT. WEDNESDAY, October 5th, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may va

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	5	9	& 8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	17	5	0
Alum (loose lump) .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ % .. .. ne ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880=28° B. .. .. ,,	0	0	2½
,, =24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/- & 33/-		
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	9	15	0
,, ,, (grey) Hull .. .. ,,	9	15	0
Aniline Oil (pure) .. .. per lb.	0	0	5
Aniline Salt ,, ... ,,	0	0	4½
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	£2/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	5	0	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	15	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 25/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8¾
,, 50/90 ,, ... ,,	0	0	9
Carbolic Acid (crude 60°) .. .. per gallon	0	2	0
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97% .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	2
Copper .. .. per ton	52	16	3
,, Sulphate .. .. ,,	17	5	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80 % .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. — .. .. ,,	14	2	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, brown ,,) .. .. ,,	17	0	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	5	0
,, ,, (grey) (ex ship .. .. ,,	7	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	10	0
Stearine .. .. per ton	25	0	0
Phosphorus (yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. ..nett per lb.	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	4
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	22	5	0
,, ,, (Caustic Potash) 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	3	2	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % do.) .. .. .. ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, (f.o.r. w'ks.)	2	7	6
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. net, per ton.	13	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¼
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton (10 ton lots)	7	17	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	12	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	5
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton.	1	6	0
,, ,, (Glauber's Salts) .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100% .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5½
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton.	7	7	6
(Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26%) .. .. ,,	2	10	0
Tallow .. .. ,,	23	5	0
Tin Crystals .. .. per lb.	0	0	5¾
,, English Ingots .. .. per ton	78	15	0
Zinc (Spelter) .. .. ,,	22	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

HEMICAL TRADE JOURNAL

AND

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FOOD PRESERVATIVES.

EVER since the advent of the Food and Drugs Act difficulties have arisen as to the interpretation that should be put upon certain clauses, and despite numerous amendments many of these difficulties still pertain.

When the County Councils came to the front we were troubled with prosecutions concerning the presence of alum in bread, the composition of baking powders, mustard, vinegar and whatnot.

In this stage of the anti-food adulteration crusade we argued mainly on the ground that food was food, and should be sold as such. The introduction of ingredients which were not essential, and yet by their presence tended to cheapen production, without any benefit to the purchaser, opened the door to abuses which it was wise to eliminate once and for all.

Of late a new phase of the question has predominated, in that attention has been directed not only to actual adulterants, but substances which are used as preservatives. In this case it is not only the pockets of the public that have to be protected but the public health. We would fain admit that in our own opinion the latter consideration is of more importance than the former.

Comparatively recently we referred to the use of boric acid, and in the face of medical evidence admitted that used in moderation we saw no objection to its use; and, so far, we are still of the same opinion. It will, however, give many cause to reflect when they learn the recently expressed opinion of Dr. Hill, the Birmingham Medical Officer of Health, for his experience has been wide, and his conclusions should be drawn from trustworthy *data*.

It appears that he has arrived at the conclusion that the use of chemical preservatives ought to be prohibited altogether, because they enable foods to be sold as fresh which are stale, and which have undergone such putrefactive changes as to make them frequently harmful, and sometimes actually poisonous. Secondly, whatever minor differences may exist among physiological experimenters and others, Dr. Hill contends that they are agreed upon one thing, namely, thateven though small doses exert apparently no serious influence upon health, the same could not be said of large doses. In short, all additions to food whose influence on health was doubtful ought to be prohibited, and their use supplanted by refrigeration.

These are pronouncements which involve many issues, and raise more difficulties than are apparent to the mental eye, at the first glance.

It is hard to know where we are to stop in defining what shall come under the heading of "doubtful additions" to food. Take, for instance, boric acid in butter, and saltpetre in curing hams and pickling beef.

Nitre is as much a chemical or a medicine as boric acid, but it has been used for too many years, as a food pre-

servative, to be displaced summarily. Yet if boric acid and the etceteras are to go, so must nitre.

What is more, while refrigeration is an excellent alternative in the abstract, it does not lend itself to local requirements, to say nothing of the expense. It may be a simple thing to enforce refrigeration and forbid the use of "preservatives" by law, but even when a certain line of action is actually legalised, it does not follow that it is expedient.

There is something rather too Utopian about the whole idea of thus banishing from use all food ingredients that may in any possible way injure health. What will harm one will not affect another. This has often been demonstrated in cases of tinned meat poisoning, and if the idea is carried out thoroughly, we shall eventually be compelled to classify provision merchants according to whether they cater for dyspeptics, or people with digestive organs of the millstone type.

Would it not be better to try and fix a limit to the amount of preservative that may reasonably be added to the various classes of perishable foods, this limit being fixed by the vote of medical officers of health in the United Kingdom? Considered from a purely ethical point of view there is no doubt Dr. Hill's contentions are sound, but unfortunately we still only live in *hopes* of the millennium, and it is for the conditions of the moment that we have to provide, in as prompt and practical a fashion as possible.

THE ELSWICK ENGINEERING WORKS.

TO have been invited by Sir Andrew Noble to inspect the extensive works of Sir William Armstrong, Whitworth, and Co. on the banks of the Tyne at Elswick, to have made on several successive days and under efficient guidance tours through the numerous shops and shipyards, to have seen the great ships in the building, the heavy ordnance in process of manufacture, the submerged torpedo tubes in actual and successful operation, is an experience which will always be memorable. The first and almost dazing impression left upon the mind is one of stupendous greatness. The second feeling of an Englishman, alive to the jealousies and dangers which beset our country, is one of reassurance. Many, perhaps the overwhelming majority, of these huge and delicate engines of defence and destruction are in process of construction for foreign Governments. They might be used against us at some future time if we should be committed to warlike operations. But Elswick is always there, a great reserve of national strength. Though the ships of war in the building from time to time may be intended for Japan, China, Brazil, Norway, Portugal, or other States, though the big guns may be inscribed with foreign measures of calibre, the fact remains that ships and guns alike are capable of translation into English. Let England be involved in war and the translation will take place automatically. Elswick is, in a sense, a naval dockyard and arsenal for the world; but at the moment of trial England has the right of pre-emption over everything that Elswick contains, and that which had been intended for others who might be our enemies would certainly never reach them for use against us. The story of one vessel of war which I saw lying in the river—a story familiar to Elswick, but striking to the stranger—exemplifies forcibly the part these great works play in the naval manufacture of the world. The vessel—it is needless to name her—had been built and armed at Elswick. In the course of one of the South American wars, of which no busy man can afford to keep count, she had been sunk by a torpedo discharged from a submerged torpedo tube with which her adversary had been equipped at Elswick. Raised to the surface, she had been brought back to the Tyne again to be refitted at Elswick. That little statement of facts, instinct with irony, combined with the list of ships and their destinations which is given below, serves to emphasise the character and the value of Elswick Works. Others rely upon them mainly because they must, but in time of trouble they are always at the absolute disposal of the country which houses them.

Elswick Works are, of course, but one of the establishments of Sir W. G. Armstrong, Whitworth and Co. There are also great works at Openshaw and at Pozzuoli. Some idea of the scale upon which the firm carries on its operations may be gathered from the fact that when the King of Siam visited Elswick in August of last year, the workmen, excluding those working in mines and collieries, employed by the firm were about 24,000 in number. Owing to the dislocation and delay caused by the engineering dispute of last year and the present year, that number of workmen had not yet been re-employed; but the figures are sufficiently impressive. Moreover, the various departments of the works at Elswick are sufficiently vast and varied to warrant me in reckoning them high among the greatest works in the world. Let me endeavour, as shortly as may be, to give some idea of the scale and variety of the operations upon which the fortunate visitor may look. Let us pass on one side the engine works with their steam-pumping engines, swing-bridges, coal hoists and hydraulic machinery of many kinds. In the ordnance works one sees all the operations in the manufacture from start to finish of all sorts of guns, from the heavy 12 in. 50-ton guns to the twelve-pounders and Hotchkiss gun-barrels. One looks at operations of boring, turning and rifling, at the cutting of breech-screws, at the boring and turning of cradles, at gun details in progress, at barrels being stained and finished, at hydraulic valves and rammers, electrical details, steady platforms for search-lights, mountings, torpedo tubes, shields, turn-tables, powder and shell hoist, and a score of things besides. Some idea is given of the magnitude of the problems which are presented to the leaders in the science of modern warfare when it is mentioned that about £100,000. a year is spent at Elswick in purely experimental work. Some of these, notably that in which an aluminium projectile was made to travel at the record velocity of 5,000 foot-seconds, have been of great importance. Important also was the determination of velocities obtainable from different lengths of bore with various explosives. The scale of the whole is colossal, and one learns without surprise that the guns in course of manufacture in August last year were 1,380 in number and of various calibres up to 12 in. What the actual output by the year is or how much could be turned out under stress of acute demand it is impossible to say. The demand for warlike material is, in the nature of things, irregular, although of late it has increased rapidly and is being met. But an approximate idea can be formed by considering the following facts: First, the guns of all sizes, from 3-pounders to 12 in. guns under construction in the first quarter of this year were 1,615; secondly, it will be noticed that particulars of armament, all in manufacture at Elswick, are given with the list of ships now in construction at Elswick which appears later. In addition to this, and exclusive of work in large amount which is being carried out for the British Government, the firm are constructing complete installations of armament for 13 different ships which are being built at other yards at home and abroad. That word "abroad" is full of meaning as an indication of the reliance which foreign countries place upon Elswick; for it is notorious that when a vessel is built in any country every effort is made to keep the order for her armament also in that country.

In the armaments specified will be found frequent mention of torpedo-tubes. Our own admiralty have, as is well-known, spent many years and much money in seeking (and discovering) a satisfactory method of launching a torpedo under water from a vessel going at full speed. Outside the Admiralty Elswick claims to have been the first to devise a submerged torpedo-tube. Many difficulties were encountered, but the defects which were discovered were remedied and the ultimate results were completely successful. The Japanese, who are good customers of the firm, showed their confidence in it by agreeing to have such tubes constructed in the *Yashima* and the *Fuji*. I was permitted to be present in the depths of the *O'Higgins* while the efficiency of her tubes was being tested in the most ingenious manner and with the most eminently satisfactory results. I even venture to think that I understand in an elementary fashion the forces which are brought to bear, the manner in which they operate, and that I appreciate in part, at any rate, the calculating ingenuity manifest in every part of the apparatus; but the details of the process are hardly a matter for public treatment.

We are far indeed from being at the end of those wonders of Elswick which are apart from the shipyard. It would be pleasant to linger over the steelworks, to discourse on the Siemen's melting furnaces and the hydraulic forging presses, of the construction of gun carriages, the cutting of armour plates, and the manufacture of projectiles and cartridge cases. The various steps in the stamping out of cartridge cases, by the way, are among the prettiest processes to be seen at Elswick. But in these anxious days the producing capacity of Elswick, and its value as a reserve of strength, are the things which matter. That is best shown by the particulars of what Elswick has done of late and is now doing. In the year ended in July, 1898, no fewer than eight men-of-war, of from 12,500 tons to 4,500 tons displacement, were despatched by the firm, and seven vessels were launched. In addition no fewer than 16 other vessels, not built by the firm, were equipped wholly or in part with guns constructed in the ordnance department of the Elswick works. Beyond doubt this is a great record.—*Times.*

CHANGES OF ADDRESS.—*Messrs. The Albion Chemical Co.* announce that they have removed to larger and more commodious premises situated on the river, and in future their address will be Riverside, Charlton, London, S.E.—*Messrs. Stein Bros.* state that in consequence of the increase in their business they have removed to larger and more convenient offices at Eastcheap House, 24, Eastcheap, London, E.C.

The Patent List.

is compiled from Official sources in the Manchester Laboratory, under the immediate supervision of Davis and Alfred R. Davis, who report professionally alue of Chemical Patents.

CATIONS FOR ENGLISH LETTERS PATENT.

Kelp. S. Pitt. 20,356. September 26.
e Gelatinous Matter from Marine Plants. S. Pitt. 20,357.
r 26.
Air Washer. E. A. Everard and A. C. E. Greene. 20,377.
r 27.
Downward Filtration Filters. H. F. Hibbert. 20,397. Sept. 27.
or the Manufacture of Acetic Acid. C. Dreyfus and A. G.
0,445. September 27.
nts in Matches. C. Kastner. 20,449. September 27.
Metallic Oxides. O. Elstner. 20,450. September 27.
ewage Sludge. W. R. Hutton, junr. 20,620. September 30.
Seeds after Extraction with Solvents. W. R. Harrison and
nson. 20,649. September 30.
agging, etc, Extracted Oil Seeds. W. R. Harrison and
nson. 20,650. September 30.
Cane. C. D. Abel. 20,670. September 30.
Wool Grease with Naphtha. E. Erben. 20,678. September 30.
e of Portland Cement. P. Davies. 20,679. September 30.
e of Tannic Extracts. A. Rainard. 20,680. September 30.
de of Chromium from Chrome Ore. R. W. E. MacIvor and
ncer. 20,681. September 30.
Boiler Scale. E. D. Hopcroft. 20,728. October 1.
aolin and other Substances containing Iron, and Obtaining
mpounds. W. R. Ormandy. 20,744. October 1.

ACTS OF LATEST COMPLETE SPECIFICATIONS.

tracts are specially prepared for the Chemical Trade Journal, IGHTS *of publication are* RESERVED. *This is the earliest tracts of Chemical and allied patents accessible to the public.*

nts in and connected with the Manufacture of Calcium
. J. E. T. Woods, 38, Chantry-road, Stockwell, and W. A. Byrom,
St. Helens, London. Eng. Pat. 14,453. June 30, 1898.

ace referred to in patent 14,780/98 (*C.T.J.* 593, p. 211) is
n detail. The chief feature is the burner used to combust
mixture of acetylene, marsh gas, and hydrogen, prepared
o the patent just mentioned. It is tuyere shaped, and consists
conical casing, the upper portion of which is divided
by two diaphragms into an air and a gas chamber. Tubes
hese diaphragms to the face of the burner, and air being
the upper compartment draws in the gaseous mixture on the
nciple, the two burning at the end of the tubes. Three
rs are fitted to each furnace. There are four figures.

nts in and relating to Electrical Furnaces, specially ap-
for the Production of Calcium Carbide. G. W. B. Crees,
d, Trowbridge, W. L. Durban, 79, Ashton-street, Trowbridge, and
Crandon Villa, Trowbridge. Eng. Pat. 26,880. November 17, 1897.

ace is rectangular, and the two ends are movable, by means
rods and hand wheels, so that they may be caused to
ach other during the process of manufacture. These ends
the electrodes. Several advantages are claimed for this
rrangement. There are two figures.

nts in Treating Spirits and other Liquids with Gases.
lliard, 65, Renfield-street, Glasgow. Eng. Pat. 23,724. October 15,

id to be treated is placed in a vessel resembling in shape a
The ends of the tube are connected by a pipe, in the length
circulating pump is introduced at any convenient point.
is also connected with a gasholder containing oxygen or
as is going to be used. When the pump is in operation the
circulating, while the amount absorbed by the liquid or lost
is constantly made up from the holder, as required. There
gures showing various ways of arranging the apparatus.

nts in or connected with the Manufacture of Slag Wool.
ingram, Post Office Buildings, Middlesbrough. Eng. Pat. 23,670.
4, 1897.

e obvious drawbacks in having the wool-making plant near
s, while, if the plant is any distance off, the slag has to be
To overcome this re-melting, and yet have the wool plant
venient position, it is suggested to catch the slag in a ladle
on a truck into an annealing furnace, heated by gas or other means. The slag is thus rendered denser and better fitting for blowing into wool. When desired the slag is tapped off and fed by a spout just on to the blowers, where it is comminuted and carried straight into the wool sheds, which are directly opposite the blowers. There are two figures.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for August, 1898, as compared with August, 1897 :—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	17,286	21,534	5,273	6,975
Sweden and Norway	12,532	6,884	2,488	1,826
Germany	18,019	9,951	4,304	2,402
Holland	15,876	6,977	2,739	1,488
France	4,260	4,657	1,469	1,721
Spain and Canaries	32,395	26,908	10,603	8,702
Italy	24,099	19,083	7,491	5,930
United States	88,782	47,804	18,251	10,272
Australasia	14,297	21,134	4,587	6,423
British North America ..	11,520	11,057	2,625	3,228
Other countries	137,120	95,256	37,355	28,540
Total	376,186	271,245	97,185	77,507

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	60,742	48,123	18,415	12,132
Other countries	26,343	28,846	8,506	8,241
Total	87,085	76,969	26,921	20,373

THE NOBEL COMPANY PRIZE.

THE following are some further particulars concerning the "Nobel Prize" referred to in our issue of October 1st :—The directors of Nobel's Explosives Company, Ltd., after consultation with Dr. G. G. Henderson, Freeland Professor of Chemistry in the Glasgow and West of Scotland Technical College, have decided to give a prize tenable under the following conditions :—

(1). The prize to be £30., and to be known as the "Nobel Company Prize."
(2). The prize to be awarded annually, until further notice, to a student in the chemical laboratory of the Technical College who has passed through the usual course of training in that laboratory, and who, in the opinion of the Professor of Chemistry for the time being, is qualified to prosecute research.
(3). The holder of the prize to engage in research work in the chemical laboratory of the Technical College, under the direction of the Professor of Chemistry for the time being, for the period of one academical year, viz., from beginning of October until middle of July.
(4). The prize to be awarded by the Professor of Chemistry for the time being, but to be withheld in any year if there is at that time, in his opinion, no student in the chemical laboratory with the necessary qualifications.

It was also suggested by the directors "that, while not making it a condition of the gift, the prize might be awarded by preference to a student who would be willing to accept it on the understanding that the Company would have the first call on his services, on terms not less favourable than those he might secure elsewhere." In accepting the gift on the above terms the Governors of the College further resolved to grant a free studentship for one year in the laboratory to the Nobel Company's Prizeman, thus raising the money value of the prize to about £50. The example of Nobel's Company might profitably be followed by other chemical manufacturers.

ALBUMEN MANUFACTURE IN CHINA.—The German firm which opened an albumen factory at Chin Kiang in 1897, has continued working successfully. Cargoes of this product are sent to New York and the Continent of Europe.

Reports of Companies.

ANGLO-SICILIAN SULPHUR CO., LTD.

The second annual ordinary general meeting of the shareholders of the Anglo-Sicilian Sulphur Co., Ltd., was held on Friday, 7th inst., at Winchester House, E.C., under the presidency of Mr. W. T. Brand (the chairman of the company).

The Chairman said: I have the pleasure to ask you to adopt the report and accounts and to declare a dividend of 6 per cent. per annum on 189,000 fully-paid £1 preference shares, and on 498,990 preference shares on which 15s. per share has been paid up prior to July 31, 1897, and a dividend at the same rate on 12,010 preference, 15s. paid, from date of payment into the bank. Of this dividend 3 per cent. was paid on March 26th last. I have also to ask you to declare a further dividend of 1d. per share on the fully-paid and ¾d. per share on the 15s.-paid preference shares out of the surplus profit credited to this class of shares during the two years since the formation of the company under Article 13 of the articles of association. I have further to ask you to declare a dividend of 7d. per share upon the ordinary shares of the company, being at the rate of 58⅓ per cent per annum, free of income tax, which dividend I trust you will consider highly satisfactory. Before asking you, however, to declare these dividends I should like to tell you something as to the progress of the company during the past financial year. Our receipts of sulphur in Sicily from August 1st, 1897, to July 31st, 1898, were 275,110 tons, and we sold for delivery during that period 284,960 tons of crude and refined sulphur at an average gross profit of 9s. 10d. per ton. In England we received 31,500 tons of recovered sulphur, and delivered 31,534 tons at an average gross profit of 5s. 4d. per ton. The contract into which we have entered with the Catania refiners has proved fairly satisfactory and has assisted us to keep control of the market in Sicily. As regards our prospects for the current financial year, these are, I think, promising. We have already made large sales, at satisfactory prices, of crude and refined Sicilian sulphur, amounting to some 94,000 tons, a considerable part of which has already been delivered, and our sales of English recovered amount to 10,121 tons, deliverable between the present date and December 31—which practically clears us out of this article for 1898—and 10,690 tons, so far, for delivery during 1899. So you will see that we are not letting the grass grow under our feet, but have worked with a view to securing profits sufficient to provide an interim dividend next March upon the preference shares of the company. Turning to our balance-sheet, which I have no doubt you have all read, you will see that the gross profit amounts to £143,941. 2s. 1d., to which has to be added £5,879 17s. 3d., being interest on deposits, investments, transfer-fees, and other receipts, making £149,820. 19s. 4d., after adjusting the Sicilian assets to the rate of exchange ruling at July 31 last, viz., 27·20. On July 31, 1897, the exchange reserve account showed a credit balance of £5,241. 10s. due to the adjustment of the exchange to the rate then ruling, viz., 26·35, and in the further adjustment of exchange to 27·20 for the purposes of the balance-sheet now before you. This credit has now absorbed, and the exchange account shows a debit balance of £8,588. 8s. 5d., which your directors have thought it prudent to write off the profits of the year.

From the gross profit, viz., £149,820. 19s. 4d, has been deducted £6,226. 19s. 10d., being one-fifth of goodwill and preliminary expenses, £2,230. 16s. 4d. difference in valuation of investments, £20,574. 19s. 5d. allowance for possible loss on final realisation of stocks, £205. 9s. 10d. for depreciation of furniture, inspectors' premises, &c., and £29,715. 3s. 5d. for current expenses in London and Sicily, leaving a balance of £90,867. 10s. 6d, which it is proposed to deal with as follows:—Preference dividends already paid and to be paid, £34,283. 9s. 1d.: capital guarantee fund, £11,316. 16s. 3d., which fund will then stand at £13,945. 0s. 5d.; general reserve fund, £22,582. 1s. 6d., which will then stand at £29,633. 1s. 10d. One-tenth of the balance remaining—viz, £2,268. 10s. 4d—will be credited to the preference shareholders, with balance brought forward from last year, admitting a further distribution of 1d. per share on fully-paid and ¾d. on 15s. paid preference shares, carrying forward to their credit in next year's accounts £205. 8s. 8d. Nine-tenths of the balance will go to ordinary shareholders, £20,416. 13s. 4d., being a dividend of 7d. on each 1s. share, or at the rate of 58⅓ per cent. for the year, free of income-tax. These are results on which the company may, I think, fairly be congratulated, as well as on the prospects for the current year, to which I have already made reference. But I must also ask you to remember that this company is a trading company, formed with the object of dealing mainly in the sulphur produced in Sicily, which at the time the company was constituted amounted to about 350,000 tons per annum only. Owing to the stimulus to production given by the certainty of good prices and steady markets, the output has been materially increased. The figures are as follow:—From August 1st, 1896, to July 31st, 1897, 421,704 tons; from August 1st, *1897, to July 31st, 1898,* 439,879 tons; whilst the exports, also largely increased, were, respectively, from August 1st, 1896, to July 31st 413,081 tons, and from August 1st, 1897, to July 31st, 1898, 4 tons. Though production is still increasing, owing to the m tensive use of sulphur in the comparatively new industry of woo making and sundry other trades, the consumption has hither pace with the production, and we all earnestly hope that it m tinue to do so. But I need hardly remind you that what we wis not always come to pass, and as prudent business men w endeavour to make provision for contingencies which may arise future, such as an excess of production, the substitution of a c material, new inventions, and so forth, and it is to guard agains risks that your directors think it advisable to add to, and cont increase, the reserve funds of the company. Now, if any of yo any questions to ask I shall be very pleased to answer them to th of my power before asking you finally to adopt the report and the dividends recommended.

Mr. J. Darell Blount seconded the motion.

A shareholder asked for a little more information as to th allowance for possible loss on final realisation of stocks.

The Chairman said the company had virtually to hold the in order to regulate prices. As they knew, the contracts made company were firstly with the English manufacturers for five without power of renewal—although, no doubt, they would be de to renew if it suited the purpose of the company for them to do s then with a certain number of Sicilian producers for five yea power of renewing for a further five years. There was a claus articles of association giving power to the preference shareho they were not satisfied with the prospects of the company at the five years, of saying to the ordinary shareholders that they mu up the company unless they bought them out. Before the end five years a meeting would be called, and the directors would sta views; but if they recommended the winding-up it would because some new invention had interfered with the use of sulp the production of sulphur had so overtaken the consumption th could not see their way to hold the stock necessary to regul market. If they gave up the control of the market with a ver stock on hand, the price would probably fall heavily, and therefo made the provision to which the shareholder referred; it was n additional reserve. If they went on at the end of five years the have written off the goodwill and preliminary expenses and ha reserve, so that they would not have to put aside so much out yearly profits.

The motion was unanimously agreed to.

A vote of thanks was, on the motion of the Chairman, secon Mr. Lee, accorded Mr. Florio (vice-chairman in Sicily), Mr. G (director), Mr. Lewis Sofio (manager), Mr. Travazlia (directing en and the staff at home and in Sicily for the manner in which th worked in the company's interest, the Chairman remarking that threw their hearts thoroughly into the business.

GILL McDOWELL, JARRAH, LTD.

Lord Lurgan presided on Monday at the Cannon-street Ho the statutory general meeting. He reminded them that the ca the company was £250,000., divided into 125,000 preferen 125,000 ordinary shares, and 120,000 of each class had been Of the 50,000 shares appropriated to provide working capital had been subscribed for and issued, and 10,000—half preferen half ordinary—were reserved for future issue when required transfer of the property to the company had been duly complet the title deeds deposited to the order of the company with the N Bank of Australasia (Limited) at Perth, whose receipt they h the same. It transpired, on their solicitors in Australia inves the vendors' title, that the vendors had for very good reasons their title to a portion of the property at Sawyer's Valley, con about 1,200 acres—described as 96-31—to lapse. The vend posed to substitute in lieu of this property certain timber licenc prising a total of 6,400 acres. Before assenting to this sub they cabled their solicitors in Australia to make full inquiries a relative value of the property proposed to be substituted for tha was not to be taken over by the company. Mr. J. Ednie Bro thereupon consulted, and he advised as follows:—"I consider land of about 6,000 acres given in exchange for 96-31 is worth ten times as much. The 6,000 acres comprise some of the bes forest in the Nelson district." Another question also arose as title to the land at Drake's Brook, upon which the Drake's Bro were erected. The vendors and the prospectus stated that t were erected on freehold property, but the solicitors discovered t were on Government leasehold land. The vendors were therefor upon to acquire the freehold of this site, about 23 acres, from the ment, which had been duly vested in the company. He par mentioned these two items to show them how fairly the compa been met by the vendors, and also to show them that, althou had so quickly got their titles into order, they had not done so

btaining less than their full rights. As a matter of fact, instead ea of the 154,000 acres mentioned in the prospectus, they had of over 159,000 acres. Directly the purchase was completed t instructions to the local board to proceed with the erection mills on the spot considered most convenient for immediate They had quite recently had a telegram from Mr. F. D. tating that three new mills were now in course of erection at Brook, and the directors expected that they would be com- ithin ten weeks. He might also state that they had bought es of steel rails and a locomotive from the Government. This ion would show them that the business was being pushed for- ith the utmost vigour, not only here but also in Australia. he next general meeting they hoped to have at least ten mills ork and the forests at the Busselton end also in working order. stion might naturally arise with the shareholders, as it had done board—Was there such a demand for the timber as to justify erecting other mills and developing the resources of the com- rapidly as he had foreshadowed? It would be perhaps suffi- him to say that the present mills had been fully employed in timber for the local requirements, and they anticipated no ff in that direction. On the contrary, he thought that they ite justified in anticipating that the local demand would with the development of the colony, which was pro- as satisfactorily as could be desired. Jarrah was the ber that met every requirement for railway, sea, mining, ding purposes; and wherever the white ant existed timber was indispensable. They did not anticipate that and would be confined only to Australia. On the contrary, rge demand existed in London (where it was sure to develop) very important provincial town, as well as on the Continent. er first-rate wood paving was required there was a market for It might be suggested that the business was overdone, and petition would be engendered which would make the export mber unremunerative. That was a point which the directors y carefully considered, and they had arrived at a decided that the demand for Jarrah was likely to increase much more han the supply. If competition did arise he saw no reason for fear it; up to now they had held their own, and they had nfidence of being able to do so. They had had some little in obtaining vessels, but they had fixed up with some owners actory rates. With regard to dividend prospects, they could resent be bound absolutely; but from their information they doubt that the dividend on the preference shares would be January, as well as the interim dividend on the ordinary shares. ad applied for a Stock Exchange quotation, but a little delay urred owing to the request of the committee that clause 109 of cles of association might be expunged. This clause gave a power to nominate a substitute in case he was absent. They e asked at a later meeting to authorise the requisite alteration, ey did so another meeting would shortly be called to confirm cision. In that case the requirements of the Stock Exchange epect would have been complied with. In answer to Major , the chairman stated that the idea of the company starting its t had already occurred to him, and at the earliest opportunity tter would be discussed by the directors. An extraordinary meeting was held subsequently, when a resolution was passed to the excision of the clause in the articles of association to.

HATE *v.* NITRATE FOR WHEAT.—As the result of experi- carried out at Woburn in growing wheat under various ns of manuring, the best kinds were the produce of plots with mineral manures and sulphate of ammonia. A comparison these plots and those dressed with nitrate of soda revealed a difference in the produce. There was an increase in the of tail corn, and a much lower weight per bushel of dressed the plots treated with nitrate.

NICAL SCHOOL FOR SMETHWICK.—At the last meeting of the rick Technical Education Board—Mr. Jabez Lones presiding— s of the new technical schools were submitted and discussed at rable length. Four plans were presented, two prizes of £50. 5. being offered by the Board. It was stated that one of the ns of the competition was that the total cost of the building be about £5,500. It was decided to submit for the approval of trict Council the set of plans marked "Experience," provided of erection was in accordance with the provision stipulated, and vent of this condition not being complied with, it was decided mmend the Council to accept the plans marked "Science and The Secretary (Mr. G. C. Lloyd) reported that Viscount n had written intimating his willingness to visit Smethwick n the 17th or 19th of December for the purpose of distributing es to the students of the technical classes. It was decided to lordship to come on the 17th of December.

LEAD POISONING IN THE POTTERIES.

II.

(Concluded from p. 214.)

THE EXTENT OF LEAD POISONING.

WHEN a man has lead poisoning in his mind, many of the earlier symptoms lend themselves with great facility to a wrong diagnosis. Colic, headache, anemia, constipation—they are common to a thousand other conditions; but it seems to be a settled thing in many quarters that factory hands not only must have lead poisoning, but may not have anything else. Quite recently a girl who has never worked in the lead at all has been reported as poisoned. It is not even necessary to be in a factory. A diagnosis of lead poisoning was made the other day upon a grocer's boy who had a rash on his arm. The doctors have lead on the brain as well as the patients, and the craze is carried so far as to make the greatest caution necessary in accepting alleged cases, especially if they are of a startling kind. However, this extreme tendency has rather manifested itself since the agitation, and does not apply so much to previous statistics; but I notice that out of 404 cases in 1896-97 analysed by the lady inspectors, 23, or nearly 6 per cent., were differently diagnosed by the certifying surgeon. Another point to be noted is the inclusion of old recurrent cases in the returns. These often go from factory to factory, and have repeated attacks at short intervals. Of the 404 cases referred to above, 161, or very nearly 40 per cent., had had previous attacks. It is clear, therefore, that a good deal may be said upon both sides, and that it would be unwise in the light of present knowledge to pronounce the returns either too high or too low.

Taking them as they stand, therefore, we get an annual liability among all pottery workers of one in 164; that is to say, one out of every 164 workers gets lead poisoning in the year, including new and old cases. A little more light is thrown on the subject by the lady inspectors' return already quoted. They found that the 404 cases occurred in 132 factories employing 3,040 persons in lead processes. As there are 392 factories in all, it follows that in two factories out of three no cases occurred. Then, assuming that the proportion of lead workers is the same in all factories, we get a total of about 9,120 workers, which gives a liability for the whole district of one in 22½ for old and new cases together, and one in 37½ for new cases alone.

THE EFFECTS OF LEAD POISONING.

The next question that arises is, How many of these cases are serious and how many slight? When the term "lead poisoning" is made to include anything from a single attack of vomiting or a rash on the arm to blindness, paralysis, and death, a mere enumeration of numbers is obviously worth nothing without further information. Unfortunately we have none. Dr. Prendergast has made a very good suggestion, that cases should be divided, as with epilepsy, into two classes—a major and a minor—each to include a certain group of symptoms. The requisite information is in possession of the Home Office, and if the suggestion were adopted in the next report, it would help greatly to elucidate a subject on which more accurate knowledge is badly wanted. The present practice of giving a handful of selected cases is merely tantalising.

Another serious aspect of the evil is its effect upon maternity. The subject is not very suitable for discussion in a newspaper, but the facts given in the Chief Inspector's last report deserve attention. Out of 77 married women reported as affected by lead only 36 had born living children, of which 40 per cent. died in infancy of convulsions. These 77 women had only 61 living children among them. This seems a very striking fact, but its value could be estimated better if a corresponding group of women not affected by lead had been contrasted. The influence of lead in this direction is well known to the women, who are in the habit of seconding the chances of poisoning at the factory by resorting to the chemist's shop. Some interesting information on the subject was given to me by a chemist at Hanley, a very well-informed and observant man. He told me that factory women were in the habit of coming to buy diachylon (oxide of lead) in lumps, a pennyworth or two at a time. They take it internally, and there is no concealment about the object, which is to avoid the pains and penalties of motherhood. Only women working at the "pot-bank" do it, and those mostly married. Since public attention has been drawn to the subject he has made a point of questioning them and has refused to sell the stuff for the purpose. When the maternity of lead workers is discussed this practice ought not to be overlooked.

IS THE EVIL INCREASING?

Here, again, information is meagre and opinions contradictory. The committee of inquiry in 1893 reported that there was then "less prevalence of plumbism among the pottery population than in past times, notwithstanding a growing number of factories and workshops." This opinion was based on the admissions to the North Staffordshire Infirmary for a number of years and on the returns of the North Staffordshire Provident Association. Both showed a marked diminution from

1884 or 1885 down to 1892. Since then, however, the numbers at the infirmary have risen again, though the latest figures given are not so high as those of 1885. In that year there were 31 admissions; in 1896 there were 30, with a largely increased population. The Haywood Hospital also had eight admissions in 1896. These figures, by-the-by, confirm my doubts as to the frequency of severe cases. According to some accounts, one would expect them to be numbered by hundreds; but if only 38 find their way into the local hospitals in a year, they cannot be very numerous. In connection with this point I have been requested on behalf of the rector of Longton to deny the statement published in a letter to *The Times* that lead poisoning has been treated at the Cottage Hospital. The severe cases, however, have increased of late, and particularly those of blindness. That is authoritatively stated by the Chief Inspector, and is, I believe, pretty generally admitted. The reason given is the introduction of certain new processes and branches of manufacture in which women and girls are largely employed. I had meant to describe the dangerous processes in this letter, but it would take too much space, as there are still some points to be discussed before I come to the remedies.

CONDITIONS INFLUENCING THE PREVALENCE OF LEAD POISONING.

Lead is taken into the body through the mouth, either by swallowing or breathing, and also to some extent through the skin. In the potting industry it is dangerous chiefly in the dry, powdery form. It flies in the air and is breathed; it gets on the hands and persons of the workers, and so is both breathed and swallowed. Its effects on health, therefore, obviously depend on two sets of conditions—the one concerning the surroundings and the other the worker. The first includes both the workshop and the materials used. The present agitation has been directed to both, but chiefly to the materials; I will speak of them later when dealing with the remedies, and will now refer only to the workshop. The important thing is obviously to have it so fitted and arranged as to minimise the diffusion of lead-laden dust. Ventilation and the prevention of dusty accumulations are the objects to be aimed at—in other words cleanliness of the air, of the floor, and of the workman's bench. I need not describe here how these things are attained; it is a matter of construction and of various appliances. Undoubtedly everything that can be done in this way to minimise the risk of the employment ought to be done, and undoubtedly factories differ considerably in the character of their arrangements. But what I wish to point out is that it would be a mistake to lay too much stress on the workshop. Some of the best appointed factories have had a good deal of lead poisoning; some of the worst have never had any. It is the least important of all the conditions. A case which I followed up showed me how easily one may be misled on the subject. A man had wrist drop and other lead symptoms—out of work for 18 months. I found him out and heard his story. He was a wretched specimen of humanity, about 5 ft. high, and of the poorest physique; had been employed as a dipper in a small factory; his brother, employed before him, had died; the dipping-house was a shocking place, no ventilation, and so on. Nothing could sound worse. Here was a veritable death-trap, claiming one victim after another. I went to the factory. "Come and see the dipping house," said the manager. I did, and found it open to all sorts of objections—quite the worst I had visited. But there I saw a ruddy faced, sturdy fellow at the dipping-tub. "How long have you been dipping here?"—"Ten years." "Ever had any lead?—"Never the slightest sign of it." Then it turned out that this man was their regular dipper and had been absent on "please leave"—a colloquialism for enforced absence for breaking rules—when the other man at his own urgent request was allowed to take the place. Two or three workmen, who had known the latter from boyhood, volunteered the information that he had never been fit for anything all his life, and had repeatedly suffered from lead, but insisted on working in it. I do not defend the dipping-house, but the whole story puts its responsibility in a very different light.

The conditions connected with the workers are age, sex, idiosyncrasy, and personal habits. The young are more susceptible than adults, females than males. As for idiosyncrasy, no one knows anything about it, but badly-nourished and badly constitutioned persons seem more liable than others. The most important condition of all, however, is the personal habit of the workers. Upon that point there is a universal consensus of opinion, but I am content to rely on their own statements. I have discussed the subject with them over and over again in various factories. Whenever I found any one working in the lead I asked how long he or she had been doing it, and they would tell me. In every single factory I went into I found men and women who had worked in the lead for very long periods—10, 20, 40, and even 50 years—without a trace of ill-effects. I began to take notes of them, but they became too numerous. Directly I asked the question as to their own health they would volunteer the explanation:—"You see, Sir, it depends on a man himself." These immune workers do not always keep the rules; I met with several who flatly refused to wear overalls, for instance; but they are cleanly in their person. They do not sleep in their working clothes, and they wash their hands as a rule. *One man, who has* worked as a groundlayer (one of the most dangerous processes) for 52 years with absolute impunity, would not wear a respirator and said "he did better without it," but he was a picture of neatness and cleanliness. The general indifference of the working people to the dangers of lead is deeply ingrained. Mr. Wilson told me that their apathy is the greatest obstacle the reform committee has encountered. One firm had to discharge several girls since the agitation began, because they insisted on eating oranges and dipping them in the leaded colours out of sheer bravado. The women are noticeably more careless than the men, which may account for their greater susceptibility. Mr. Folker reckons that 17 out of 20 cases of lead poisoning are caused by carelessness. The lady inspectors rather suggest that they would be more careful if more facilities were provided. Perhaps; but it is a difficult thing to eradicate traditional habits, and the use made of the existing facilities is not encouraging. Some light is thrown on the relative responsibility of employers and employed by the results of the special rules. The Chief Inspector reports that "there has been material improvement in dust conditions," but not with regard to lead poisoning. The first is the affair of the employers; for the second the co-operation of the employed is essential.—*Times*.

THE WORKMEN'S COMPENSATION ACT AND THE COST OF ACTIONS.

At Crewe County Court recently two cases under the Workmen's Compensation Act were brought against the London and North-Western Railway Company by the relatives of two of their employés who had died from injuries the result of accident whilst in the execution of their duties. It was explained that in both cases the railway company admitted liability, and had paid into court sums of £300. and £176. respectively as compensation, the question for the court being how these sums should be allocated amongst the wives and children of the deceased workmen. Incidentally the point was raised as to who was responsible for the preliminary costs—a point on which the Act is silent,—costs only being recognised after the award has been delivered by the arbitrator. Mr. Solley, of Euston, who appeared for the Company, argued that it would be unfair to mulct the Company in costs, because from the very first they had admitted their liability, and had paid the relatives money to enable them to tide over their immediate necessities until such time as the Court made its award. The railway company were anxious that the dependents should have the full benefits of the Act, and, to show that, he mentioned that in one of the cases then before the Court where the parties had not obtained legal assistance the Company had assisted them in the preparation of the necessary forms, and had paid into Court £300., the full amount recoverable under the Act. Under these circumstances he did not think the Company ought to be called upon to pay the costs. In case the costs were given against them the Company would have to reconsider their position, and require the widow or dependents to take out letters of administration. Mr. Latham, on the other side, argued that this was a new Act, and it was only natural that parties should seek legal assistance in understanding their position, and to enable them to fill up the requisite forms aright. The Deputy Judge (Mr. W. Goldthorpe) said it was an important question, and took time to consider it. On Saturday last his Honour communicated his decision, which was to the effect that the plaintiff in the case represented by Mr. Latham was entitled to her costs. His Honour, however, does not lay that down as a principle.

THE ANGLO-CONTINENTAL GUANO CO.—It may interest our readers to know that the twenty-fifth anniversary of the opening of the London Office of the old firm of Messrs. Ohlendorff and Co., succeeded some years since by the Anglo-Continental (late Ohlendorff's) Guano Works, was celebrated on Saturday last by the whole staff dining together at the Crystal Palace.

WATER IN THE EAST KENT CHALK AREA.—According to several of the London daily papers, a series of important and interesting experiments have been made in East Kent with the object of ascertaining the water-producing powers of the great chalk areas. The investigations have produced some valuable results, particularly in regard to the enormous quantities of the purest spring water which runs to waste daily by being poured into the sea from the base of the chalk cliffs. From observations made, it is estimated that at least 100 million gallons of water are lost in this way daily in the St. Augustine's Division of East Kent alone. The experiments have been made at intervals over a period of two or three years; and, notwithstanding the great drought which is affecting the upper springs all over the country, the tests made during the past few days at the base of the cliffs between Dover and St. Margaret's show that there is absolutely no diminution in the supply of spring water as compared with the past three years. The springs are visible at low water.

Agricultural Notes.

SIMPLE AND COMPOUND MANURES.

ures may be classified with regard to their composition, apidity in action, their solubility, their bulk, and in a of other ways; but the classification is always more or less y, and if a really comprehensive system be adopted the same must often be placed in two or more classes. But all manures placed in one of two great classes, simple and compound, h these divisions may be subdivided almost indefinitely. A manure practically contains but one element of plant-food, h in reality others are found in minute proportions along with dominant element; whereas, a compound manure contains two elements of plant-food in decided proportions Here again ment may be predominant, but there is at least one other source of od present in such quantity as to affect the possible uses of the , and also its commercial or pecuniary value. For example, rd dung is a compound manure; indeed, it may fairly be termed, sense, a "complete" manure, in that it contains all the chemical ts in an available form that are necessary to a soil—whether naturally or added artificially it matters not, so long as they are ntly available– to ensure fertility or productiveness. As is now own, these primary elements of plant nutrition are phosphoric itrogen, and potash. As examples of simple manures we may e nitrate of soda and sulphate of ammonia, as sources of nitrogen; salts—kainit, sulphate of potash, muriate of potash, etc.—as of potash; and superphosphate of lime and Thomas' phosphate or basic slag as sources of phosphoric acid.

ing regard to the varied requirements of plants, it might at first hat it would be advisable always to use compound or complex s, and it is partly owing to this consideration that farmyard has attained the high position now assigned to it in the agricul- orld. It must not, however, be forgotten that while all plants phosphoric acid, nitrogen, and potash, different plants, or at different species of plants, require these constituents in different tions—in some cases widely different—to those found in farm- anure. The turnip will afford an excellent illustration of this. s require that there should be present in the soil, in an available large quantities of phosphoric acid; roughly speaking, three greater than the requisite amount of nitrogen. Thus, as farm- anure contains only about half as much phosphoric acid as its t of nitrogen, it will readily be seen that if there be applied for only just as much farmyard manure as will yield an adequate of nitrogen for the crop—and to supply more than this would ly involve waste of the excess of the nitrogen—there will be a leficiency of the equally necessary phosphoric acid. Here it is simple manure, supplying the missing element only, steps in as a le auxiliary, for, were the deficiency of phosphate made up by an ed quantity of farmyard dung, not only would certain waste of n occur, as previously pointed out, but the plant would utilise a of the surplus nitrogen to its own injury. So well is this known modern farmer—or perhaps we should say the modernised —that he uses only comparatively small quantities of dung for nip crop, and avails himself of the aid of simple mineral phos- manures, referred to above as "auxiliary."

writer wishes to guard against any misapprehension of his ng. He has no intention whatever of inveighing against the use yard manure; so far, indeed, is that from his purpose that he it best to state here that in his opinion—founded, in part, upon n personal experience, extending over many years—farmyard e should be, and is, where it is obtainable at reasonable cost, the f economical and successful manuring; but to attain the ideal of productiveness, such treatment of the farm must be supple- d by artificial manures judiciously selected. To more fully illus- his we would again refer to the requirements of the turnip plant. that the land has received a suitable application of farmyard e, this must, as previously pointed out, be supplemented by a g of phosphate, in order to equalise the deficiency of this element dung. For this purpose it is generally considered that a small g of superphosphate with the seed meets the plant's require- in the earlier stages of its growth, in that it, the superphosphate, rapidly taken up by the young plant, increases the activity of its , and carries it beyond the reach of its dire enemy, the fly. This l stage once passed, however, the aftergrowth should be gradual, er to favour thorough nourishment and complete maturity; hence, ange of diet"—to borrow a medical term—is rendered desirable. sive experience has shown that 5 to 7 cwt. of the more recently uced form of phosphate, Thomas' phosphate powder or basic applied per acre in early spring, meets this need in the steadier, regular, and fully adequate manner calculated to ensure a crop of of high feeding value and good keeping quality. On the other if the whole of the crop's probable requirements—phosphate—in addition to that contained in the dung—be applied in a too readily soluble form, the danger is that the plant will, in its earlier stages, glut itself with this element, thereby inducing a rank growth; but the plant is likely to flag later, on account of the soluble phosphate being used up too soon.

The mention made above of the waste and injury resulting from a too liberal use of farmyard dung for turnips might be largely amplified, but it will be sufficient for our purpose to point out that scarcely any two crops require exactly similar manurial provision, and that in deciding upon the particular manuring for any given crop the farmer must have regard to the nature of the crop required, the condition of his land (which, of course, is affected more or less by previous cropping and manuring), and to the nature of his soil. What he must aim at, in order to manure economically and effectually, is to supply to the land from time to time as nearly as possible just what it requires for each particular crop following in the established order of local rotations. In most cases further addition would be wasteful, although less so on a retentive soil than on a hungry soil; and it might also, and often would, be positively injurious to his crops.

One exception may, however, be taken to this rule, and that with respect to the addition of phosphoric acid or phosphates in suitable form. This is now growingly recognised as the most important element of plant nutrition; hence the advice given by many agricultural authorities to apply more phosphates than will be required by the crop calling for the application, as by this means an increasing store of fertility will be provided. When this method is adopted it is, of course, essential that such a form of phosphate be selected that will neither "waste" in the soil by excessive moisture, nor be likely to "revert" in the soil.

From the foregoing it will be obvious that if the farmer is to supply to a crop just what that crop requires and nothing more, he will find it easiest to effect his purpose by the use of simple manures, and so for this reason their use is generally, although not universally, advisable. Then, too, it usually happens that, having due regard to all other matters, it will be found that any desired fertiliser can be more cheaply procured in the form of a simple manure yielding that fertiliser only than in any other form, and this economical side of the question must never be overlooked.—*Mark Lane Express.*

THE AMERICAN PETROLEUM TRADE.

THE Bureau of Statistics of the Treasury Department, Washington, in an official statement regarding American petroleum exports, says:—"The United States illuminates the world more effectively and completely each year. Despite the fear so frequently expressed that the large production of petroleum in Russia and Dutch East Indies and the increased use of electricity for lighting purposes would reduce our valuable exports of illuminating oils, the year just ended has shown the greatest exportation of that article in the history of that important branch of our foreign commerce, and the figures for August show the largest exportations of oil for any single month on record. The reports of the Treasury Bureau of Statistics show that the exports of mineral oils in the fiscal year 1898 passed the billion gallon line, the total, including all classes, being 1,034,269,676 gallons, against 973,514,946 gallons in 1897 and 890,458,994 gallons in 1896. The exports of oil in the year 1898 were practically double those of 1888 and three times those of 1878, but the money received for them was only about 25 per cent. greater than that received either in 1878 or 1888. The total receipts for the 1,034,269,676 gallons of oil exported in 1898 were $56,126,578., while for the 578,351,638 gallons exported in 1888, the receipts were $47,042,409., and for the 338,841,303 gallons exported in 1878 the receipts were $46,574,974. The average export value of refined illuminating oil was, in 1872, 24·9 cents per gallon; in 1878, 14·4 cents per gallon; in 1888, 7·9 cents per gallon; and in 1898, 5·2 cents per gallon, having thus fallen from 24·9 cents to 5·2 cents from 1872 to 1898. Notwithstanding this steady fall, the production and exportation continue to increase, the exports having increased over 60,000,000 gallons in the past year over that of the preceding year, and over 100,000,000 gallons over that of any earlier year, while the production for 1897 was 2,528,067,984 gallons, against 2,033,331,972 in 1894, 836,394,132 in 1880, and 510,825,588 in 1876. The production in 1897 was five times that of 1876 and the exportation of last year nearly five times that of 1876."

TREATING GALVANISERS' PICKLE.—In the recent report of the Home Office Committee on Dangerous Trades it was mentioned that the Committee had been unable to find the Turner process in operation. Messrs. Walker Bros., Ltd., of Walsall and Netherton have sent us a reprint of some correspondence in the *Birmingham Post* which states that the process has been, and presumably still is, in operation at the works of this company.

Trade Notes.

Combination in the Salt Trade.—Negotiations have been going on for some time between salt producers with a view to eventually raising prices, on account of the loss in connection with the present state of the trade. We understand that all the producers are agreeable with one exception. The idea is to extend the system which is at present at work on the East Coast, and to have a separate company as a selling corporation to deal with sales generally. There is to be another meeting in Liverpool on Monday next, at which final arrangements will be made.

The Nobel Will Dispute.—A fresh lawsuit is pending in Germany in connection with the late Mr. Nobel's will. Several years ago a syndicate was formed at Stockholm for the purpose of working iron ore mines in Norway. The first costs were defrayed by a group of financiers, headed by Consul N. Persson, of Helsinborg, and including the late Mr. Nobel, who bound himself to subscribe £5,000. towards the company to be formed. This sum is now claimed from the heirs, and the Consul has already taken steps to obtain payment.

Proposed Dyers' Combination.—The scheme for combining the piece dyers of the Bradford trade in one company is, it is stated, very nearly an accomplished fact. An agreement has been arrived at with the majority of the masters as to the price at which they will sell their businesses to the new concern, only one at present standing out for a higher price. Flotation will, it is stated, take place before Christmas, and it has already been agreed that the business shall be taken over as from September 30. The firms have agreed to take stock and strike balances up to this date; profits thereafter are to be credited to the new company. The actual capital will be nominally fixed at £3,000,000.

Fire Extinguisher Trial.—At the Albert-street Police Yard, Manchester, on Tuesday last, a trial was made of the British Emergency Fire Extinguisher, which has been in use in America for about four years. The inventor, Mr. S. M. Stevens, of Manchester, and New Hampshire, has constructed a tube which is filled with a chemical liquid capable of generating a gas on coming into contact with flame. On Tuesday the action of this gas extinguished two fires in a remarkaby short time. In the first case the test was designed to show the efficacy of the invention with a fire immediately on its outbreak; in the second, the flame had got considerable hold of the wood before the liquid was applied. The tube containing the liquid is of small size, and the sealed end can be knocked off with no trouble. The liquid and the gas are said to be quite harmless.

New Laboratories at Liverpool.—The new laboratories in University College, Liverpool, were opened on Saturday last by Lord Lister. A brilliant company assembled in St. George's Hall to witness the admission of Lord Lister to the degree of Doctor of Science in Victoria University. His lordship delivered an interesting address. The laboratories, it may be stated, consist of two wings uniting at nearly a right angle. The ground floor is devoted to pathology, one wing being occupied by the classroom for practical morbid histology, which is 56 feet long and 26 feet wide and is fitted up to accommodate about 60 students. It opens directly into the pathological museum. In the other wing is located the room for bacteriology, 53 feet by 19 feet. On the first floor is the large theatre. Here every modern contrivance has been adopted which can help to supply the wants of lecturers and students. On the second floor the larger wing is occupied by the practical histology room, the largest apartment in the building, 60 feet by 40 feet, which is fitted up to accommodate 80 students, and could be made to accommodate several more. The basement contains a cold storage room kept at a constant low temperature by the ammonia process, a laboratory for carrying on the work of the Clinical Investigation Society, and rooms for other kinds of experimental work. The erection of the new laboratories has occupied two years.

The Dangers of Basic Slag.—The West Cheshire Coroner (Mr. Bate) held an adjourned inquest at Ellesmere Port, last week, on the body of Thomas Taylor, labourer in the employ of the Shropshire Union Railway and Canal Company, who died on the 29th September.—It had been part of Taylor's occupation to assist in the transhipping of basic slag, and the evidence showed that he had complained of its injurious effect upon his chest.—Mr. H. S. Richmond, inspector of factories, elicited that the slag had recently been put in double bags, which did not emit the same quantity of dust. The company supplied their employés with respirators.—Dr. Harrison, surgeon to the Chester police, deposed to having conducted a post-mortem examination of the body. The cause of death was pneumonia of both lungs, and he agreed with the other medical opinion that the inhalation of basic slag might set up a chronic inflammatory process which would render a person liable to acute inflammation should he take cold.—The jury found that the cause of death was inflammation of the lungs, resulting from taking cold after inhaling basic slag, and recommended the compulsory use of respirators.

Market Reports.

TAR AND AMMONIA PRODUCTS.

There has been nothing to break the monotony in benzols, 90's still being quoted 8½d. to 9d. and 50/90's at 9d. Carbolic acids have been moving fairly well, and close steady at last week's quotations. There is nothing fresh to report concerning naphthas. Pitch is firm and more promising, but values still remain 25s., f.o.b. East Coast, and 23s. in the West. Anthracene drags along at 4d. for 30% A and 3d. for B.

Sulphate of ammonia seems rather erratic in its movements, but the fact remains that, although dealers succeeded in depressing prices, the depression was nominal. Makers were in a strong position as regards stocks, and were not disposed to operate at a reduction. In consequence there has been a mild reaction, and the inquiry for prompt delivery has improved, with London outside makes, at £9. 10s.; Liverpool, £9. 13s. 9d.; Hull, £9. 10s.; and Leith £9. 10s. to £9. 11s. 3d. Beckton quotation has been withdrawn.

MISCELLANEOUS CHEMICAL MARKET.

Business during the past week has been of a fairly satisfactory nature, and there are but few changes to report. Bleaching powder continues in moderate request at £5. 2s. 6d. prompt; for 1899 delivery lower figures are being accepted. Soda ash of all grades remains unchanged. Caustic soda in good demand, both for home and export, at former rates. Salt cake moves readily and price is firm; 27s. nett is about value to-day at makers' works. Chlorates of potash and soda are rather firmer, but there is no quotable change. Nitrate of soda sells steadily at £7. 12s. 6d. to £7. 15s. Sulphate of copper firm at £17. 5s. to £17. 7s. 6d. f.o.b. White powdered arsenic has a a strong position, and to-day's quotation is £17. nett at Garston. Tin salts are advancing, due to rise in the metal. Acetates of lime are higher in price, caused principally by the high rates of freight now ruling; present value, £5. 7. 6d. brown; £7. 5s. grey. Ammonia salts weak; "white" can be had at £19, and grey at £17. 10s. Crude carbolic acid finds a ready market at 2s. per gall. for 60's. Oxalic acid quiet at 3¾d. per lb. Sulphur of all descriptions rather slow of sale. Prussiate of potash and soda are without material alteration and the supply obtainable is but small. Borax is quoted at £14., but there is only a small amount of business passing. The demand for fine chemicals is still below the average.

REPORT ON MANURE MATERIAL.

The market is quiet, but fairly steady all round.

Among United Kingdom buyers there is very little interest in mineral phosphates, and the buying on the Continent is mainly for second half of 1899 and first half of 1900, production up to July, 1899, being practically all sold. Full prices are being realised for 1899, but for 1900 about ¼d. per unit decline is being accepted.

River Plate bones are inquired for, but in the absence of cargoes offering there is no business to report. The value is fully £4. 13s. 9d. per ton, delivered good U.K. ports. East Indian bone meal is scarce, and £4. 17s. 6d. per ton is nearest value ex-store and for shipment.

Nitrate of soda is firm in all positions, the shrinkage in visible supply as compared with same time last year not showing as yet any diminution. On spot the value of ordinary quality is 7s. 6d. per cwt. and that of refined, 7s. 9d. per cwt.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 49s. 6d.; Middlesbro', 44s. 2½d. cash; and hematite, 55s. 8½d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed at £53. 0s. 0d. to £53. 5s. 0d. cash, and £53. 3s. 9d. to £53. 8s. 9d. three months. Tin steady: Straits closed at £78. 0s 0d. to £78. 10s. 0d. cash, and £78. 6s. 3d. to £78. 16s. 3d three months; Australian, £78. 15s.; English ingots, £80. 15s. Lead firm: Spanish, £13. 1s. 3d. to £13. 2s. 6d; English, £13. 5s. 0d.; Silesian spelter, ordinary, £23. 0s. to £23. 5s. 0d. Nickel, 1s. 2½d. Antimony, £36. 10s. to £37. Quicksilver: First hands, £7. 5s.; second hands, £7. 4s. *Copper shares* steady: Cape, $4\frac{1}{16}$ to $4\frac{1}{8}$; Copiapo, 2¾ to 2½; Libiola, 1⅞ to 2⅛; Mason and Barry, $3\frac{1}{16}$ to $3\frac{1}{8}$ Rio Tinto, $29\frac{3}{16}$ to $29\frac{11}{16}$; Tharsis, $7\frac{1}{16}$ to $7\frac{3}{16}$.

GLASGOW, Wednesday.—Market firm, and a good business. Scotch done at 49s. 5½d., 49s. 5d., and 49s. 6½d. cash; also at 49s. 7d. to 49s. 8d. month; buyers, 49s. 6d. cash; sellers, ½d. more. Cleveland done at 44s. 3½d. to 44s. 5d. month; buyers, 44s. 2½d. cash; sellers 1d. more. Cumberland hematite done at 55s. 9½d. month; buyers, 51s. 8½d. cash; sellers, 51s. 9d. Middlesbrough hematite idle.

RPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

alm oil is quietly steady, with a fair business doing. Soft n selling at £19. 10s. and hard at £18. 15s. Olive is nquired for and holders are firm. Linseed is steady at cwt. for Liverpool makes in export casks. Cottonseed 15s. 9d. to 16s. cwt. for Liverpool refined. Castor oil is with good seconds Calcutta at 3 3/16d.; first pressure o 3 1/16d.; and Madras, 2 15/16d. to 3d. per lb. Tallow is ards demand, and prices are well maintained. Resin is full rates in all grades. Spirits of turpentine are firm at ith a satisfactory demand thereat. Petroleum is more American 6⅜d. to 7¾d. and Russian refined at 5¾d. per

-The continued limited supplies of American Western again kept the market firm, and prices exhibit a further ., but the higher rates now quoted, viz., £7. to £7. 2s. 6d., ness somewhat; Liverpool makes are also 2s 6d. dearer, a good business passing for consumption at the values now £7. 7s. 6d. to £8 per ton, according to brand. Good to s of American decorticated cottonseed continue to meet a and the recent quotation of £5. 10s. to £5. 17s. 6d., quality, is steadily maintained. Liverpool makes also lerate extent at previous values, viz., £5. 15s to £6. 10s. me holders of Liverpool undecorticated makes are firmer, nore money, the quotation now showing a partial improve- extent; trading has again been to a fair extent at £4. to ton, according to brand. Egyptian are also better in £3 17s. 6d. to £4. per ton is now wanted for prime ore, but the demand at the improvement has been rather

S.—Prices are steady, and practically without change. Oxfordshire—common £10., medium £12, best £15.; -common 40s., medium 50s., best 60s.: Welsh—best 9 s.; ., and common, 18s.; Devonshire, 40s. to 45s.; , 65s. Umber: 40s. to 45s. White lead: £16. Red ed. Venetian red: £6. to £10. Cobalt: Prepared .; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; .; finest, £20. Zinc oxide: £22. 10s. to £25.

PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

he general demand in this trade may be described as fair. acturers, however, are seriously handicapped in the trade , which at one time was a very heavy one; for a few well ls of linseed oils. The price of linseed oil has improved with values closing firm; the contrary, however, is the otton seed oil. The imports to date as against the same go have been—Linseed, 297,424 qrs. against 490,975 qrs.; 10,185 tons against 7,880 tons; rapeseed, 57,566 qrs. 90 qrs.; cottonseed, 136,518 tons against 142,007 qrs.; 498 tuns against 3,480 tuns; tar, 5,043 barrels against ls. Linseed oil closes firm, spot, 16s. buyers; and Jan.- ½d. buyers; boiled and refined £1. to £1. 10s. per ton extra. on oil closes very dull, spot, naked, 13s. 10½d., sellers .-April, 13s. 1½d.; barrels £1. 10s. and casks £1. per Olive oil and olive oil soaps are unchanged. Castor oil in extracted here—cold drawn, in barrels, 30s. 6d. per cwt.; d. per lb.; pure first pressure 28s. per cwt., in cases ; second pressure 27s. per cwt., in brls.; in cases 3 1/16d. per lb. hanged from £18. 5s. per ton, f.o.b. Continental ports. 6. to £18. per ton. Resins unchanged.

-The high rates of seed prevent good business being done uffs which makes trade unremunerative to crushers. The ought makes feeders fall back upon artificial feeding stuffs hat is usually plentiful at this season, viz., grass. Linseed , pure, £7. 12s. 6d. to £7. 15s. Oilcakes (linseed), to £6. 15s; Russians, £7. 5s. to £7. 7s. 6d.; Americans, o £7. 5s. Cotton cakes, best makes, £4. 7s. 6d.; seconds, to £4 5s.; decorticated, £6. 5s. per ton. Rape cakes, nd poor, but prices firm.

– Manufacturers continue to do fair business with prices also for disinfectants.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

of potash has advanced, and sulphate of copper keeps quotation of a week ago. Otherwise, the general market rticular feature. The push for the fulfilment of old orders lestination is now about overtaken, and the tendency is reased quietness on that account. Sulphate of ammonia is no better account of itself to offer, the cheapening move- uing, though slowly, in consequence of the absence of demand. To-day, prompt Leith cannot be put higher than £9. 15s., and there is the expectation that some sellers are coming round to reconcilement for the time with even a lower figure. Mineral oils and paraffins are all unchanged. The strike, apprehended at the time of writing last report, has since been precipitated, and the shale miners of the Broxburn Oil Company are out. Those of the other companies are still working, but the evil is common to the whole, as, were the Broxburn Company to succumb, the others would be attacked in rotation. Prices cannot be affected, seeing that these are already screwed up as high as foreign rivalry will permit, and therefore cannot go higher without stopping sale altogether.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 12s. 6d, 70/72° £7. 2s. 6d, 60/62° £6. 2s. 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. od.; borax, English refined, £13. 10s, and boracic acid, £25. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d. less 3½%, for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d. less 3½%, for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3¾d. less 5%, Liverpool; nitrate of soda, 7s. 7½d. to 7s. 9d.; sulphate of ammonia, £9. 15. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £17. 2s. 6d to £17. 7s. 6d., less 5% Liverpool; paraffin scale, hard, 1⅜d. to 1½d. per lb., and soft 1½d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning), No. 1, 6d.; and crystal, 6¼d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 5,489 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue dull, with only a limited demand. Soda crystals locally are £2. 12s. 6d. per ton, gross weight. Sulphur £4. 15s. per ton, and scarce. Caustic soda, 70%. £7. 5s. per ton; 76/77%, £8. per ton.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 5s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett: aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees, with heavier exports.

COALS.—The coal trade is steady, best Northumbrian steam being 9s. 9d. to 10s. per ton; small steam firm at 6s. to 6s. 6d. per ton. Manufacturing coals are quiet. Gas coals in good demand. Coke firm both for home and export. Best Northumbrian steam, 9s. 9d. to 10s. per ton; small steam, 6s. to 6s. 6d. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. 6d. to 9s. per ton; household coals, 10s. to 11s. per ton; coke, 18s. 6d. to 21s. per ton.

New Companies.

Camille Simon, Ltd.—CAPITAL £3,500. in £1. shares. This company has been formed to acquire the business carried on by C. M. E. Simon, at Pier House, Chiswick, W., and to carry on the business of soap manufacturers, calenderers, dye manufacturers, oil and colourmen. The number of directors is not to be less than 3 nor more than 5. The first are C. M. E. Simon, L. P. Simon and T. Brutton. Qualification, £500. Remuneration, C. M. E. Simon, £210.; L. P. Simon, £160; and T. Brutton, £130. per annum.

Cornwall China Clay and Stone Co., Ltd.—CAPITAL £5,000. in £1. shares. This company has been formed with objects as fully indicated by the title. The number of directors is not to be less than 3 nor more than 5. The subscribers are to appoint the first. Qualification, £100; remuneration as fixed by the company.

E. C. Warnes & Co., Ltd.—Capital £10,000. in £10. shares. This company has been formed to import, export, refine and deal in oil, seed, turpentine, etc. The number of directors is not to be less than 3 nor more than 7. The first are W. Fairclough, E. Dodd, T. H. Sissons, D. W. Sissons, and E. C. Warnes (managing director). Qualification, £250. Remuneration as fixed by the company. Registered office, The Avenue, High-street, Kingston-upon-Hull.

Great Western Cement Co., Ltd.—Capital £15,000. in £1. shares. This company has been formed to adopt an agreement with C. Mullen, and to acquire, own and work a cement factory at West Drayton and Hillingdon, Middlesex. The subscribers to the memorandum of association are:—A. G. Langdon, 17, Craven-street W.C., architect; W. T. Robins, 279, King's-road, Chelsea, cement merchant; E. H. P. Francis, 2, Cowley-street, Westminster, cement manufacturer; T. E. Rosher, Milverton, Beckenham, Kent, brick manufacturer; S Ellis, 297, Kingsland-road, N.E., cement merchant; H. C. Cooley, 23, Trinity-square, Newington, S.E., cement merchant; H. J. Burton, 4, Watford-villas, Battersea Park, S.W, manager.

New Paccha and Jazpampa Nitrate Co., Ltd.—Capital £72,000. in £1. shares. This company has been formed to acquire the business of the Paccha and Jazpampa Nitrate Co., Ltd. (in liquidation) and to manufacture and deal in nitrates, iodine and other products. The subscribers to the memorandum of association are:—H. Holroyd, 57, Gracechurch-st., E.C., secretary; J. Alexander, 51, Constantine-road, Hampstead, clerk; A. Lesser, 14, Westbourne Terrace, Hyde Park, solicitor; R. L. Evans, 8, Rosslyn Hill, Hampstead, gentleman; G. A. May, 27, Barcombe-avenue, Streatham Hill, clerk; A. J. Schneidan, 346, Uxbridge-road, W., gentleman; L. Tripcony, 110, Hemingford-road, Islington, clerk.

Gazette Notices.

PARTNERSHIP DISSOLVED.

W. C. Kingdon and E. H. Jones, paint, colour, and varnish manufacturers' Liverpool, under the style of Kingdon and Jones and Kingdon & Co.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 1st.

Acetate of Lime—
U. States, 1,126 pks. H. Wallace & Co.

Acetic Acid—
Holland, 50 pks. R. W. Greeff & Co.

Acetone—
Germany, 8 pks. L. & I. D. Jt. Co.
Belgium, 100 E. Catlin

Acids—
Holland, 88 pks. Little & Johnston

Alkali—
Germany, 10 c. J. Barber & Co.
France, 112 J. Harrison

Antimony Ore—
Straits, 70 t. H. Grey, Junr.

Asbestos—
N. Russia, £360 Andorsen, Becker & Co.
Italy, 15 C. Lindley & Co.
" 460 Williams

Barium Chloride—
Germany, 70 pks. Petri Brs.

Barytes—
Holland, 63 pks. G. S. N. Co.
Belgium, 272 J. L Lyon & Co.
Germany, 67
Holland, 36 W. H. Carey & Sons
Belgium, 32 O'Hara & Hoare
Holland, 89 Taylor Brs.

Bleaching Powder—
Holland, 74 pks. J. M. Steel & Co.
France, £90 "

Bleaching Soda—
Germany, 200 cs. H. Lambert

Bone Meal—
E. Indies, 100 t. A. Hunter & Co.

Bones—
N. Zealand, 7 t. Mid. Rly. Co.
Queensland 4 Culverwell, Brooks & Co.

Bromine—
Germany, 40 pks. A. & M. Zimmermann

Caoutchouc—
France, 11 c. H Johnson & Sons
Thursday Is. 19 Prop. Bull Wf.
E. Indies, 22 W. M. Smith & Sons
Zanzibar, 71 L. & I. D. Jt. Co.
Straits, 44 Gilman Brs. & Co.
Germany, 44 F. Huth & Co.
" 6 Wallace Brs.
Aden, 65 "
Zanzibar, 21 Hale & Son
Ibo, 72 "
W. Indies, 49 "
Ibo, 12 Clarke & Smith
Straits, 545 E. Boustead & Co.
" 73 W Pope & Co.
France, 22 Prop. Bull Wf.
W. Indies, 70 Anderson, Weber & Smith
Niger, 76 L. & I. D. Jt. Co.
" 30 Forbes, Forbes, & Co.
Portugal, 284 W. M. Smith & Sons
Germany, 36 L. & I. D. Jt. Co.
" 5 Butler's Wf., Ld.
P. E. Africa, 15 Hale & Son

Caustic Potash—
Germany, 11 pks. J. M. Steel & Co.
" 20 dms. D. T. Domeier & Co.

Chemicals *(otherwise undescribed)*
Germany, £580 A. & M. Zimmermann
Belgium, 79 John Cockerill Line
Germany, 90 Craven & Co.
" 53 R. Greening
Belgium, 373 T.H. Lee
Germany, 100 L. & I. D. Jt. Co.
Holland, 37 Hernu, Peron & Co.
" 42 T. H. Lee
Germany, 11 Butler's Wf., Ld.

Copper Sulphate—
Germany, 18 cks. Charles & Fox

Cream of Tartar—
Holland, 10 pks Kirkpatrick, Barr & Co.
Italy, 86 B. Jacobs & Sons
France, 25 W. C. Bacon & Co.
" 20 B. & F. Wf. Co.
" 16 F. C. Devon & Co.

Dyestuffs—
Aniline
Germany, 2 pks. Butler's Wf., Ld.
Argols
Italy, 94 pks. Thames S. T. & L. Co.
Cochineal
Canaries, 10 pks. W. M. Smith & Sons
Cutch
Germany, 39 pks. H. A. Lichfield & Co.
Divi Divi
Ceylon, 256 pks. Colombo Coml. Co.
Extracts
U. States, 26 pks. W. E. Barnes
Belgium, 50 M. D. Co.
France, 40 Bennett S. S. Co.
Germany, 55 Butler's Wf., Ld.
France, 105 L. J. Levenstein & Sons
Gambier
Straits, 252 pks. J. W. Cook & Co.
" 2,000 Adamson, Gilfillan & Co.
Indigo
E. Indies, 11 chts. P. Macfadyen & Co.
" 11 L. & I. D. Jt. Co.
Logwood
B. H'nd'ras, 112 t. Belize Est. & Prod. Co. Ld.
" 213 W. Shelcott
Tanners' Bark
Natal, 22 t. Boutcher, Mortimore & Co.
" 29 A. & W. Nesbitt
Valonia
A. Turkey, 10 t. Pickford & Co.

Dyestuffs *(otherwise undes.)*—
France, 2 pks. E. Flageollet & Co.
Adelaide, 12 c. J. W. Cook & Co. Ld.
Melbourne, 245 t Anning & Cobb

Farina—
France, 6 pks. H. Ewald & Co.
Austria, 14 G. Thompson
Belgium, 2 John Cockerill Line
Italy, 745 C. Tennant, Sons & Co.

Glucose—
France, 200 pks 200 c. W. E. Cole
" 200 200 Trier, Meyer, & Co.
Germany, 1 5 Stein Brs.
U. States, 103 103 L. & I. D. Jt. Co.

Glue—
France, £187 Burnett Brs. & Sons
" 920 Lon. & Til. Ltge. C. & D. Co.
" 104 J. Harrison
Belgium, 20 J. C. Kitten
" 12 Leach & Co.
" 2,128 R. G. Hall & Co.
Germany, 40 J. Greig & Co.
" 86 Steinhoff, Sons, & Co.
" 35 C. A. H. Nichals
Norway, 350 "

Glue Stock—
E. Indies, 74 bls. J. W. Cook & Co., Ld.
Queensland, 7 L. & I. D. Jt. Co.
Germany, 15 Hicks, Nash, & Co.
Belgium, 60 D. C. Thomas & Sons

Glycerine—
France, £320 H. Hill & Sons
Holland, 300 J. Owen

Kainit—
Germany, 50 t. F. W. Berk & Co., Ld.

Litharge—
Germany, 29 pks. Petri Brs.

Manganese Ore—
Germany, 3 t. R. Ulrich

Manure—
Germany, 50 t. F. W. Berk & Co., Ld.

Methyl Alcohol—
France, 9 dms. Lister & Biggs

Mica—
E. Indies, £30 E. Flageollet & Co.

Mineral White—
Germany, 50 pks. H. Johnson & Sons

Molasses—
Holland, 50 pns. J. W. Cook & Co.
650 c. Ld.

Naphthaline Salts—
Belgium, £64 W. H. Brown & Co.

Ochre—
France, 42 pks. Smiths & Co.
" 40 W. Harrison & Co.
Spain, 200 J. L. Lyon & Co.
Holland, 13 Phillipps & Graves

Paraffin Wax—
Germany, 7 brls. Butler's Wf., Ld.

Phosphate Rock—
Belgium, 345 t. Anglo-Contl. Guano Works
" 170 West & Penrose
" 230 D. de Pass & Co.
France, 150 West & Penrose

Pitch—
N. Russia, 300 cks. W. F. Malcolm & Co.
" 700 Linck, Moeller, & Co.
France, 49 Poth, Hille, & Co.

Plumbago—
U. States, 2 cks. Lunham & Moore
Holland, 85 brls. Morgan Crucible Co.

Potassium Bicarbonate—
Holland, 15 pks. A. & M. Zimmermann

Potassium Carbonate—
Germany, 218 c. H. Lambert
" 90 Petri Brs.
" 100 J. M. Steel & Co.
Canada, 122 Charles & Fox
France, 20 J. A. Reid

Potassium Cyanide—
Germany, 1 cs. Blagden, Waugh, & Co.

Potassium Oxychloride—
Sweden, 100 kgs. G. Boor & Co.

Potassium Prussiate—
Belgium, 17 pks. Blagden, Waugh, & Co.

Potassium Sulphate—
Germany, 50 pks. Butler's Wf., Ld.

Rosin—
U. States, 200 brls. T. Nickels & Co.

Rosin Oil—
Belgium, 10 brls. J. C. Kitton
Germany, 16 D. Smith

Salicylic Acid—
Germany, 23 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 42 cks. J. Hall & Son, Ld.
" 150 kgs. P. Hecker & Co.
" 12 brls. "
" 4 cks. T. H. Lee
" 10 R. W. Greeff & Co.
E. Indies, 797 bgs. Lucas & Spencer's Wf.

Soap—
U. States, £495 Mertens & Co.
" 112 Lunham & Moore

Sodium Hyposulphite—
Holland, 32 cks. Typke & King
" 200 c. R. W. Greeff & Co.

Starch—
France, 460 pks. E. & T. Pink
Holland, 90 Phillipps & Graves
" 2,419 Little & Johnston
Belgium, 87 M. Dk. Co.
" 70 F. Clayden & Co.
" 40 T. H. Lee
" 128 Leach & Co.
" 275 E. & T. Pink
" 40 Pearce, Duff, & Co.
" 230 Becker & Wagner
U. States, 3,800 Union Ltge. Co., Ld.
" 800 J. Forsey
" 20 Beck & Pollitzer
" 100 R. G. Hall & Co.
Germany, 400 Laurence & Co.
" 120 Phillipps & Graves
" 200 C. Tennant, Sons, & Co.
" 6 Butler's Wf., Ld.

—
63 bls. J. Owen
13 bgs. H. Hill & Sons
100 "

a, 1,600 brls. Linck, Moeller, & Co.
3,464 W. F. Malcolm & Co.
26 F. & S. Chiesman & Co.
, 200 W. Beard & Son
4 Chilworth Gunpowder Co.
4 T. H. Lee

12 pks. Fellows, Morton, & Co.

Acid—
3 pks. F. C. Devon & Co.
30 Kirkpatrick, Barr, & Co.

ine—
s, 2,028 brls. Nickoll & Knight
1,000 Prod. Broker's Co.
ia, 104 F. & S. Chiesman & Co.
52 H. Bertram & Co.

rine—
, 32 pks. Steinhoff, Sons, & Co.
20 J. Harrison
2 W. Harrison & Co.
8 "

—
s, 7 pks. Williams, Torrey, & Co.
2 Bennett S. S. Co.

ead—
, 23 pks. H. Lambert
11 T. Palmer
33 Taylor Bros.
46 T. & W. Farmiloe, Ld.
24 J. R. Francis & Co.
10 Colthurst & Harding
36 J. L. Lyon & Co.
20 G. E. Banes
40 T. & W. Farmiloe, Ld.

e Ore—
und, 2 t. Blackwell & Co.

ulp—
640 pks. W. G. Taylor & Co., Ld.
520 W. E. Bott & Co.
650 Henderson, Craig, & Co.
160 G. Harborg & Co.
400 Tough & Henderson
180 Christophersen & Co.
157 M. Dk. Co.
80 Johnsen & Jorgensen
700 Tough & Henderson
4,850 London Paper Mills Co.
152 M. Dk. Co.
, 2,037 J. Harrison
80 M. H. Voss

de—
, 100 pks. D. Storer & Sons
50 J. Matton

ERPOOL.

ending September 29th.

of Lime—
rk, 899 bgs.

cid—
m, 10 blns.

—
m, 26 cks.

um—
k, 2 bxs. T. Ashbury

—
m, 134 bgs. 12 cks.

h—
, 1,674 bgs. Heyworth, Hart & Co.
qty. Haycroft & Pethick

al—
es, 600 t. Ralli Brs.

Acid—
20 cks.

il—
285 cs. Ralli Brs.

cid—
8 cks.

—
m, 264 cks. 5 cs. 6 tubs
x, 1

Cream of Tartar—
Tarragona, 3 brls. Sachse & Klemm
Bordeaux, 15 cks.
St. Nazaire, 1
Barcelona, 2 J. Bunten

Dyestuffs—
Argols
Oporto, 18 cks.
Extracts
New York, 10 brls.
Newport News, 50 H. Rooke, Sons & Co.
Dunkirk, 25 cks.
Boston, 50
Shumac
Barcelona, 127 sks.

Dyestuffs (*otherwise undescribed*)
N'port News, 1,000 bgs.

Glucose—
Rotterdam, 10 cks.
New York, 50 brls.
Boston, 350

Glue—
Rotterdam, 300 bgs. 1 ck.
Boston, 40 bls. J. Spicer & Son
Rouen, 31 cks. Co-op. W'sale
20 bgs. 40 cs. Scty., Ld.
Boston, 15 kgs. R. Ward
34 crts. & Co.
St. Nazaire, 14 cks.
Antwerp, 2

Limestone—
Antwerp, 8 cs.

Manganese—
Hamburg, 5 cks.

Mica—
New York, 29 brls.

Paint—
New York, 5 cs.
Rotterdam, 2 cks.

Paraffin Scale—
New York, 876 brls. Thompson & Bedford
Philadelphia, 500

Phosphates—
Ghent. qty.

Pitch—
Hamburg, 2 cs.

Potash—
New York, 20 cks.
Rouen, 52 Co-op. W'sale Society, Ld.
Dunkirk, 20 dms.
Antwerp, 20

Potassium Chlorate—
Rotterdam, 5 cks.

Pumice Stone—
Messina, 15 cs.

Pyrites—
Huelva, 1,617 t. Matheson & Co.

Rosin—
Wilmington, 5,330 brls.
New York, 200

Saltpetre—
Calcutta, 659 bgs. Ralli Brs.
Hamburg, 22 cks.

Soap—
Philadelphia, 1,094 pks.
Rotterdam, 11 cs.
New York, 50 bxs.

Soap Lye—
Marseilles, 10 cks.

Starch—
Rotterdam, 70 cs. Browne, Geveke & Co.
" 85
Boston, 800 sks.
Antwerp, 100 cs. J. T. Fletcher & Co.
" 640
Newport News, 400

Sulphur—
Catania, 50 t. 175 bgs.

Tallow—
Philadelphia, 95 tcs.
Boston, 180
B. Ayres, 234 pps. Ld. B. Bank Co.
" 265 cks. 955 hf-pps.
Boston, 75 tcs. L. Renderrig & Co.

Tartaric Acid—
Rotterdam, 8 cks.
Marseilles, 10

Varnish—
New York, 5 cs.
Rotterdam, 3 cks.

Waste Salt—
Dunkirk, 100 bgs.

White Lead—
Rotterdam, 10 t.

Wood Pulp—
Rotterdam, 312 bls.
Gothenburg, 41 R. L. Lundgren
" 7 A. Cowan & Co.
New York, 51 cs.

Zinc Ashes—
Philadelphia, 56 brls.

Zinc Oxide—
New York, 100 brls.

Zinc White—
Rotterdam, 50 cks.

MANCHESTER.

Week ending October 1st.

Albumen—
Hamburg, 14 cs.

Alizarine—
Rotterdam, 24 cks. 2 brls.

Alumina Sulphate—
Rotterdam, 16 cks.

Ammonium Acetate—
Rotterdam, 1 brl.

Antimony Oxalate—
Rotterdam, 10 cks.

Arachide Oil—
Rotterdam, 1 tin

Barytes—
Rotterdam, 300 bgs.

Bog Ore—
Rotterdam, 318,000 kgs.

Chalk—
Rouen, 5 cs.

Chemicals (*otherwise undescribed*)
Rotterdam, 7 cks.

Colours—
Rotterdam, { 20 bxs 69 brls. / 9 cks. 31 cs.

Cream of Tartar—
Rotterdam, 32 pks.

Dextrine—
Hamburg, 1 ck.

Extracts—
New York, 34 brls.

Farina—
Stettin, 2,110 bgs. Browne, Geveke, & Co.

Formaldehyde—
Hamburg, 2 crbys.

Glucose—
New York, 200 brls.
Stettin, { 200 cks. / 1,000 bgs.

Glue—
Antwerp, 60 bls.
Hamburg, 100
Rotterdam, 100 bgs.
Rouen, 74 cks. 40
Treport, 5 cs. 56

Lead Acetate—
Rotterdam, 30 cks.

Lead Chloride—
Hamburg, 1 ck.

Limestone—
Antwerp, 37 cs.

Lithopone—
Stettin, 67 cks.

Paraffin Scale—
New York, 1,132 brls.

Phosphates—
Antwerp, 7 cks.

Phosphorus—
New York, 30 cs.

Pitch—
Hamburg, 57 cks.

Pyrites—
Huelva, 1,867 t. W. H. Stott & Co.

Soap—
Rotterdam, 2 cs.

Soda—
New York, 32 cks.

Soda Crystals—
Rouen, 9 cks.

Starch—
Antwerp, 260 cs.
Hamburg, 260
New York, 1,495 bgs.
Rotterdam, 130

Stearine—
Antwerp, 63 bgs.

Tannic Acid—
Hamburg, 7 cks. 5 cs.

Tar—
New York, 20 brls.

Tar Waste—
Rotterdam, 6 cks.

Toluidine—
Hamburg, 9 cks.

Ultramarine—
Rotterdam, 20 cs.

Yarnish—
Hamburg, 1 ck.

Waste Salt—
Hamburg, qty.

Wood Pulp—
Gefle, 9,134 bls.
Sarpsborg, 2,546 Kellner, Partington Paper Pulp Co.
Stagsund, 2,865
Uleaborg, 214

Zinc Oxide—
Antwerp, 5 cks.
New York, 100 brls.
Rotterdam, 101

Zinc White—
Rotterdam, 10 cks.

HULL.

Week ending October 1st.

Acetic Acid—
Rotterdam, 9 blns. Hull & Netherlands S. S. Co.

Antimony—
Leghorn, 52 cks. Wilson, Sons, & Co., Ld.

Asbestos—
Rotterdam, 2 bls. Hull & Netherlands S. S. Co.

Barytes—
Antwerp, 101 cks. H. F. Pudsey
Bremen, 21 G. Holmes & Co.
Rotterdam, 153 Hull & Netherlands S. S. Co.

Castor Oil—
Leghorn, 46 cs. Wilson, Sons, & Co., Ld.
Marseilles, 28 cks. "

Chemicals (*otherwise undescribed*)
Antwerp, 103 pks. Wilson, Sons, & Co., Ld.
Hamburg, 2 cks. "

Colours—
Antwerp, 1 ck. Bailey & Leetham, Ld.
" 1 Wilson,
11 pks. Sons, & Co., Ld.
Hamburg, 6 cs. "
Rotterdam, 6 brls. Hull & Netherlands S. S. Co.
14,201 pks.

Cream of Tartar—
Bordeaux, 1 ck.

Dyestuffs—
Alizarine
Rotterdam, 30 brls. Hull & Netherlands S. S. Co.
Extracts
Bordeaux, 54 cks.
Indigo
Amsterdam, 1 chst. Hull & Netherlands S. S. Co.
Shumac
Palermo, 2,585 bgs. Wilson, Sons, & Co., Ld.
" 1,015

Dyestuffs (*otherwise undescribed*)
Rotterdam, 2 bxs. Hull & Netherlands S. S. Co.

Farina—
Amsterdam, 30 bgs. Hull & Netherlands S. S. Co.
Ghent, 19 Wilson, Sons, & Co., Ld.

Glue—
Dunkirk, 32 cks. Wilson, Sons, & Co., Ld.

Glycerine—
Rotterdam, 5 crbs. Hull & Netherlands S. S. Co.

Limestone—
Antwerp, 1 crte. Wilson, Sons, & Co., Ld.

Manganese—
Hamburg, 1 ck. Bailey & Leetham, Ld.

Ochre—
Bremen, 4 cks. Storry, Smithson, & Co.
" 8 A. Sanderson & Co.

Pitch—
Antwerp, 3 cks. Wilson, Sons, & Co., Ld.

Potash—
Dunkirk, 55 dms. Wilson, Sons, & Co., Ld.

Pumice Stone—
Messina, 1,180 pks. Wilson, Sons, & Co., Ld.
" 4 cs.

Saltpetre—
Antwerp, 135 bgs Wilson, Sons, & Co., Ld.
Hamburg, 11 pks. "

Soap—
Hamburg, 3 cs. W. R. Johnson & Son
Marseilles, 5 Wilson, Sons, & Co., Ld.

Soda—
Antwerp, 110 pks. Wilson, Sons, & Co., Ld.
Hamburg, 2 cs. W. R. Johnson & Son

Starch—
Amsterdam, 40 cs. Hull & Netherlands S. S. Co.
Antwerp, 40 Wilson, Sons, & Co., Ld.
Bremen, 2,125 Veltmann & Co.
Ghent, 180 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 63 bgs. Bailey & Leetham, Ld.
" 10 Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 150 pks. Wilson, Sons, & Co., Ld.
" 2,290

Tallow—
Dunkirk, 238 cks. Wilson, Sons, & Co , Ld.
New York, 60 tcs. "

Tar—
St. Petersburg, 4 cks. Wilson, Sons, & Co., Ld.
Stockholm, 100 brls. "

Tartar—
Naples, 12 cks. Wilson, Sons, & Co., Ld.
" 9

Tartaric Acid—
Rotterdam, 6 cks. Hull & Netherlands S. S. Co.
6 cs.

Ultramarine—
Bremen, 26 cks.

Waste Salt—
Hamburg, 82 t. and qty.

White Lead—
Antwerp, 51 cks Bailey & Leetham, Ld.
Ghent, 8 Wilson, Sons, & Co., Ld.

Wood Pulp—
Christiania, 180 bls. Wilson, Sons, & Co., Ld
Drontheim, 1,380 "
Gothenburg, 781 "
Hamburg, 15 Bailey & Leetham, Ld.

Zinc Oxide—
Rotterdam, 40 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending October 6th.

Acetic Acid—
Rotterdam 7 cks. J. Rankine & Son

Arachide Oil—
Rotterdam, 1 ck. J. Rankine & Son
1 brl.

Asbestos—
Hamburg, 3 bls.

Barium Chloride—
Rotterdam, 6 cks. J. Rankine & Son

Bleaching Powder—
Rotterdam, 40 cks. J. Rankine & Son

Calcium Carbonate—
Rouen, 36 cks.

Castor Oil—
London, 257 cks

Chromium Fluoride—
Rotterdam, 5 cs. J. Rankine & Son

Colours—
Hamburg, 2 cks.
Rotterdam, 204 pks. J. Rankine & Son

Cream of Tartar—
Barcelona, 5 pipes
Tarragona, 4

Dyestuffs—
Alizarine
Rotterdam, 22 cks. J. Rankine & Son
21 brls.
Argols
Bordeaux, 64 bgs.
Cutch
Rangoon, 860 bxs.
Madder
Rotterdam, 2 cks. J. Rankine & Son

Farina—
Delfszyhl, 200 bgs.

Glucose—
Montreal, 181 brls.

Glue—
Rouen, 1 bl.

Guano—
Talknafjord, 2,219 bgs.

Infusorial Earth—
Hamburg, 90 bgs.

Iron Oxide—
Montreal, 17 brls.

Ochre—
Rouen, 100 cks.
Rotterdam, 9 cks. J. Rankine & Son

Paraffin Scale—
Rangoon, 817 bxs.

Potash—
Rotterdam, 105 cks. J. Rankine & Son

Potassium Nitrate—
Hamburg, 50 cks.

Pyrites—
Huelva, 1,865 t. Tharsis Sulphur & Copper Co. Ld.

Salt—
Hamburg, 3 cks

Soap—
Rotterdam, 1 cs. J. Rankine & Son

Sodium Acetate—
Rouen, 19 cks.

Starch—
Rotterdam, 13 cs. J. Rankine & Son

Sulphuric Acid—
Rouen, 3 cs.

Tartar—
Bordeaux, 16 cks.

Waste Salt—
Hamburg, 500 bgs.

Wood Pulp—
Drontheim, 688 bls.
Tonsberg, 1,499

Zinc Oxide—
Rotterdam, 25 cks. J. Rankine & Son

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son
50 pks.

TYNE.

Week ending October 1st.

Barytes—
Antwerp, 450 bgs. Tyne S. S. Co.
Rotterdam, 300 "
60 cks. "

Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck.

Colours—
Antwerp, 1 ck. Tyne S. S. Co.
Hamburg, 23 1 cs. "

Dyestuffs *(otherwise undescribed)*
Antwerp, 485 bgs. Tyne S. S. Co.

Glue—
Hamburg, 6 bls. Tyne S. S. Co.

Limestone—
Antwerp, 10 crts. Tyne S. S. Co.

Plumbago—
Hamburg, 4 cks. Tyne S. S. Co.

Pyrites—
Huelva, 1,233 t. Tharsis Sulphur & Copper Co.

Salt—
Hamburg, 450 t. Clephans & Wiencke

Starch—
Rotterdam, 80 cs. Tyne S. S. Co.

Stearine—
Antwerp, 13 bgs. Tyne S. S. Co.
Rotterdam, 13 bls. "

Yarnish—
Antwerp, 3 brls. Tyne S. S. Co.

Wood Pulp—
Christiania, 660 bls.

GOOLE.

Week ending September 28th.

Alizarine—
Rotterdam, 108 brls. 2 cs.

Alkali—
Calais, 13 cks.

Antimony—
Boulogne, 2 cks.

Barytes—
Antwerp, 33 cks.
Hamburg, 50 bgs.

Bog Ore—
Delfszyhl, 153 t.

Caoutchouc—
Boulogne, 7 cks.

Chemicals *(otherwise undes*
Hamburg, 5 cs.

Colours—
Hamburg, 54 cks. 12 cs.

Dyestuffs *(otherwise undes*
Amsterdam, 6 cks. 1 cs.
Antwerp, 311 bgs. 1 brl.
Boulogne, 67 cks.
Rotterdam, 458 72 cs.

Farina—
Hamburg, 270 bgs.

Glucose—
Calais, 100 bgs.

Glue—
Antwerp, 5 brls.
Boulogne, 2 cks.

Logwood—
Belize, 350 t.

Ochre—
Calais, 51 cks.

Phosphates—
Ghent, 1,600 bgs.

Potash—
Calais, 32

Pyrites—
Huelva, 1,165 t.

Salt—
Hamburg, 735 bgs.

Saltpetre—
Hamburg, 4 cks.
Rotterdam, 70 bgs.

Soda—
Rotterdam, 18 cks.

Sodium Silicate—
Rotterdam, 3 cks.

Starch—
Ghent, 105 cs.

Tartar—
Rotterdam, 9 cks.

Wolfram Ore—
Hamburg, 3 cs.

Wood Pulp—
Hamburg, 400 bdls. 40

GRIMSBY.

Week ending October 1

Albumen—
Hamburg, 5 cks. 1 cs.

Caoutchouc—
Hamburg, 1 cs.

Chemicals *(otherwise unde*
Antwerp, 40 bgs.
3 cks. 2 c
Hamburg, 10 1 1

Colours—
Antwerp, 4 cks. 2 5
Hamburg, 107 4
5 kgs.
Rotterdam, 60 bgs. 21
1 kg.

Farina—
Hamburg, 52 bgs.

Indigo—
Antwerp, 6 cs.
Rotterdam, 7

Starch—
Antwerp, 15 c

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 5th.

Acetone—
Rotterdam, 6 dms. £70

Acids—
E. London, 10 cs. £18
Colombo, 2 12

Alkali—
Fremantle, 1 t. 2 c. £5
Madras, 3 5

Ammonia—
Calcutta, 8 cs £10
Hankow, 2 dms. 13
Rangoon, 3 30
Cologne, 21 cks. 110
Durban, 5 15
Mauritius, 3 4
E. London, 8 12

Ammonium Carbonate—
Bombay, 10 c. £21
Auckland, 2 cs. 4
Bremerhaven, 5 brls. 13

Ammonium Chloride—
Ghent, 4 cks. £18
Cologne, 4 19

Ammonium Sulphate—
Rouen, 93 t. 12 c. £950
Dunkirk, 40 380
St. Nazaire, 50 500
Colombo, 20 10 223
Hamburg, 19 195

Bleaching Powder—
E. London, 2 t. £17

Borax—
Fremantle, 2 t. 6 c. £79
Amsterdam, 10 25
Auckland, 10 9 161

Carbon Bisulphide—
B. Ayres, 10 c. £13

Carbonic Acid Gas—
Channel Is., 58 tubes £22
Halifax, 24 cs. 120

Caustic Potash—
Lyttelton, 2 t. 2 c. £50

Caustic Soda—
Lyttelton, 6 t. 11 c. £50
Durban, 2 t. 40
Wellington, 5 5 38

Chemicals *(otherwise undescribed)*
Calcutta, 6 cks. £25
Bombay, 3 cs.] £22
Napier, 6 18
Hamburg, 4 cks.
24 kgs.
Amsterdam, 9
E. London, 4
Antwerp, 1
Harlingen, 10 cks.
Mannheim, 10
Cologne, 25
Stockholm, 10
Demerara, 125 pk
Lisbon, 10
Ostend, 5 kgs.
Aden, 5
Brussels, 10
Rotterdam, 1 ck. 6
B. Ayres, 4
Syra, 15
Wellington, 57 (p
Sydney, 7
Durban, 14 pk
Brisbane, 30 (p

Auckland, 29 57
Montreal, 5 kgs. 28
Madras, 30 38
Melbourne, 23 pks. 53
Marseilles, 18 cks. 17
Cape Town, 16 75
Pt. Elizabeth, 22 293

Chloro Cyanide—
Auckland, 4 c. £14

Citric Acid—
Delagoa Bay, 1 c £7
Wellington, 3 20
Sydney, 5 32
Amsterdam, 2 14
Auckland, 2 13
Christiania, 5 33
Stettin, 4 26

Coal Products—
Alizarine
Hiogo, 15 kgs. £52
St. Petersburg, 6 cs 280
Lisbon, 3 cks. 45
Boston, 38 538
Aniline
Melbourne, 1 cs. £33
Anthracene
Dusseldorf, 341 cks. £670
Benzol
Treport, 45 cks. £122
Boulogne, 48 118
Carbolic Acid
Demerara, 5 cs. £22
Cologne, 49 cks. 201
Pt. Elizabeth, 1 18
Creosote
Gibraltar, 10 brls. £10
Dieppe, 69,966 galls. 375
St. Malo, 22,600 213
Creosote Salts
Philadelphia, 571 bgs. £151
Smyrna, 37 cks. 22
Naphthaline
Stettin, 12 cks. £54
Hamburg, 1 7
Mauritius, 1 cs. 5
Pitch
Antwerp, 455 t. £436
Aviles, 1,000 1 273
Dunkirk, 105 105
Rangoon, 25 cks. 16
Halifax, 278 80
Baltimore, 562 bgs. 76
Pyridine
Mannheim, 12 cks. £135
Tar
Stettin, 100 brls. £43
Jamaica, 15 10
Hamburg, 100 49
Delagoa Bay, 170 dms. 7
Durban, 6 750 2,524
St. Pet'rsb'rg, 4 333 cks. 2,816
Honolulu, 105 74
Trinidad, 25 20
Gothenburg, 60 40
Calcutta, 11 rmlts. 7

Coal Products *(otherwise undes.)*—
E. London, 2 dms. £7
Brussels, 1 ck. 15
Bombay, 1 cs. 20

Copper Sulphate—
Rouen, 5 t. £86
Boulogne, 5 77

Cream of Tartar—
Bluff, 10 c. £41
Melbourne, 7 kgs. 13
Fremantle, 15 59
Auckland, 1 t. 76

Disinfectants—
Amsterdam, 2 cks. £9
Sydney, 10 cs. 27
Madras, 14 pks. 25
Cape Town, 56 56
Wellington, 7 30
Sydney, { 10 76 / 50 dms. 192
Brisbane, 1 11 pks. 35
Yokohama, 5 18
Auckland, 10 29 79
Calcutta, 161 45
Pt. Elizabeth, 125 23

Glycerine—
New York, 64 t. 3 c. £1,605

Manure—
Cape Town, 370 t. £4,615
Landerneau, 371 14 c. 1,615
Rochefort, 100 400
Morlaix, 60 480
Jersey, 147 485
Bordeaux, 10 50
Colombo, 110 800
Rouen, 50 140
Uerdingen, 16 12 62

Oxalic Acid—
Sydney, 3 cks. £32

Phosphates—
Hobart, 25 t. £59

Potash Salts—
Auckland, 15 t. 18 c. £1,305

Potassium Bichromate—
Paris, 3 t. 12 c. £110
Marseilles, 1 36

Potassium Chlorate—
Rio de Janeiro, 1 t. 1 c. £30
Bombay, 4 9
E. London, 25 cs. 45

Potassium Cyanide—
Sydney, 3 t. £375
Delagoa Bay, 3 50 cs. 845
Fremantle, 5 548
Pt. Elizabeth, 2 225
Townsville, 210 2,306

Potassium Prussiate—
Antwerp, 13 c. £36

Saltpetre—
M. Video, 14 c. £14
Rio de Janeiro, 9 t. 11 200
Antwerp, 2 10 47
Montreal, 6 1 115
Wellington, 10 11
Sydney, 2 43

Sheep Dip—
Durban, 1,000 dms 20 cs. £307
E. London, 1,000 150 408
Cape Town, 100 183
Pt. Elizabeth, 999 150 375

Soda—
Napier, 2 t. 1 c. £15
Cape Town, 1 11 5
Boston 4 23
Pt. Elizabeth, 1 6

Soda Ash—
Lyttelton, 5 t. 8 c. £21

Sodium Bicarbonate—
Corinto, 1 t. £8
Pt. Elizabeth, 10 c. 6
Napier, 1 7
Honolulu, 6 6
Auckland, 2 1 14

Sodium Bichromate—
Quebec, 3 t. 7 c. £85

Sodium Sulphate—
Ghent, 110 t. £165

Sodium Sulphite—
Montreal, 1 t. 10 c. £200

Sulphur—
Ghent. 10 t. 1 c. £55
Cape Town, 300 kgs. 133

Sulphuric Acid—
E. London, 3 t. 10 cs £13
Cape Town, 1 10 c 13

Superphosphates—
Jersey, 103 t. £309

Tartaric Acid—
Bluff, 2 c. £12
Fremantle, 4 22
Sydney, 10 56

LIVERPOOL.

Week ending October 5th.

Acetate of Lime—
Winnipeg, 11 c. 3 q £7

Acetic Acid—
Lisbon, 2 t. £9

Alkali—
Santander, 5 t. 3 q. £14
Malaga, 10 20
Rotterdam, 6 5 c. 2 25
Piræus, 9 4 38
Monterey, 11 12 2 45

Alum—
Syra, 1 t. £5
M. Video, 2 9 c. 12
Larnaca, 1 4 6
Smyrna, 7 2 3 q. 39
Rangoon, 1 10 7
Sydney, 1 2 2 6
Piræus, 3 15

Alum Waste—
Melbourne, 5 t. 19 c. 1 q. £15

Ammonia—
Colombo, 1 c. 1 q. £20
Santos, 1 1 19

Ammonium Carbonate—
Hamburg, 2 t. 12 c. £85
Lisbon, 12 17
Odessa, 5 2 q. 116
Genoa, 1 32
Trieste, 10 cks. 28
Rotterdam, 1 11 44
Marseilles, 10 20
Yokohama, 15 100

Ammonium Chloride—
Salhora, 4 c. £7
Bombay, 1 t. 31
Volo, 5 10
Piræus, 12 21
Ibrail, 13 17
Philadelphia, 21 13 3 q. 421
Larnaca, 4 6
B. Ayres, 2 5 108
Melbourne, 1 17
Trieste, 1 1 1 31
Santander, 1 1 3
Progresso, 1 3

Ammonium Sulphate—
Valencia, 80 t. 15 c 2 q. £760
Honolulu, 25 240
Leghorn, 13 7 3 134
Samarang, 112 4 1 976
Sourabaya, 622 12 3 6,009
Gandea, 26 10 262

Arsenic—
B. Ayres, 17 t. 7 c. £235

Barium Chloride—
Montreal, 1 t. £8

Bleaching Powder—
Bombay, 5 cs.
Boston, 75 cks.
Calcutta, 106
Genoa, 28
Ghent, 76
Havana, 40 bls.
Leghorn, 74
Lisbon, 42
M. Video, 18 bxs.
Montreal, 180
Nantes, 15
New York, 263 25 brls.
Philadelphia, 218
Rio de Janeiro, 20 17 8 cs.
Seville, 20
Venice, 25
Vera Cruz, 140

Boracic Acid—
Rotterdam, 14 c. £18
Brisbane, 1 t. 28

Borate of Lime—
Antwerp, 18 t. £144

Borax—
Natal, 3 kgs. 1 bx. £4
Antwerp, 4 t. 2 c. 121
Fremantle, 15 10
Melbourne, 8 13 120
Ghent, 1 9 21
Hamburg, 11 2 2 q 162
Brantford, Ont, 3 2 45
Rotterdam, 1 8 20
Oporto,, 15 10
Amsterdam, 2 7 2 51
Brisbane, 1 10 22
Christiania, 2 1
Trieste, 1 5 13
Ibrail, 1 14
Shanghai, 10 8
Adelaide, 10 7
Genoa, 1 13
Montreal, 22 10 304

Ca'cium Bisulphite—
Rangoon, 4 t. 5 c £43

Calcium Chloride—
Genoa, 1 t. 4 c. £3
Melbourne Bay, 5 1 11
Santos, 1 2

Carbo ic Acid—
Paris, 9 pks. 3 t. 8 c. 3 q. £48
Rotterdam, 3 10 100
Hamburg, 10 3 38
Odessa, 6 1 24
Rouen, 17 3 48
Philadelphia, 1 1 58

Caustic Soda—
Alicante, 110 dms.
Ancona 50
Antwerp, 9
Bahia, 320
Barcelona 180 25 cks.
Barranquilla, 210
Bilbao, 30
Bombay, 45
Boston, 200
B. Ayres, 50
Calcutta, 85
Carril, 6
Corunna, 20 brls.
Dunedin, 11 dms.
E. London, 16 cs.
Galatz, 754
Genoa, 354
Hiogo, 1,130
Johannesburg, 20
Kobe, 76
Leghorn, 11
Madras, 4
Madrid, 50 brls.
Malaga, 28
Melbourne, 76
Messina, 50
Monterey, 30
M. Video, 24
Montreal, 25
Nagaski, 200
New York, 300 50 cs.
Odessa, 150
Paris, 55
Pernambuco, 30
Piræus, 15
Progresso. 30
Rio de Janeiro, 60
Rio Grande, 360
St. John's, 10
San Francisco, 20
San Sebastian, 110
Santander, 50
Sao Paulo, 20
Sarnia, 35
Seville, 645
Tampico, 100
Toronto, 100
Vera Cruz, 88
Yokohama, 419

Chemicals *(otherwise undescribed)*
Calcutta, { 1 t. 3 q. £247 / qty. & 13 brls.
Madras, 5 hf-tcs. 3 t. 13 c. 319
Boston, 209 hf-tcs. 192
Genoa, 4 cks. 32
Galatz, 2 16
Larnaca, 1 6
Hamburg, 1 9
Vera Cruz, 1 4
Barcelona, 6
Yokohama, 2 t. 56
Philadelphia, 13 1 c. 360

China Clay—
Baltimore, 450 cks.
Barcelona, 120 bgs.
Bombay, 537 cks.
Boston, 1,349
Calcutta, 520
Melbourne, 6
Montreal, 55
Pernambuco, 10 t.
Philadelphia, 410 cks. 250 bgs.
Piræus, 220
Rio de Janeiro, 96 30 brls.

Coal Products—
Aniline Salts
Barcelona, 16 cks.
Dyes
Philadelphia, 7 bgs.
Pitch
Antwerp, 159 t. 11 c.
Ibrail, 30 brls.
Tar
Accra, 25 brls.
Boston, 22 pks.
Galatz, 205
Ibrail, 30

Copperas—
B. Ayres, 4 t. 15 c. £9
Larnaca, 2 19 4
Calcutta, 27 7 3 q. 55

Copper Sulphate—
Fairwater, 2 t. 18 c. £48
Rio de Janeiro, 1 13 26
Calcutta, 1 5 20
Melbourne, 10 161
Bourgas, 1 17
Genoa, 5 2 3 q. 81
Singapore, 5 85
Pt. Darwin, 1 10 26

Creosote—
Bordeaux, 37 t. 10 c. £135

Disinfectants—
Rangoon, 11 dms. 4 c. 3 q. £19

Dried Blood—
Las Palmas, 15 t. £132

Dyestuffs—
Aniline Colours
Canada, 4 cks.
New York, 1 cs.
Extracts
Barcelona, 31 pks.
Boston, 5 cks.
Hamburg, 15
Montreal, 10

Glycerine—
Rangoon, 1 c. £6
Rotterdam, 9 t. 9 1 q. 285
Constantinople, 12 36
Montreal, 4 16 1 240
London Ont. 1 2 66

Iron Oxide—
Montreal, 13 t. 8 c. £154
Genoa, 5 15 24

Lead Acetate—
Rio de Janeiro, 7 c. £9

Lead Nitrate—
Kingston, Ja. 1 t. £19

Magnesia—
B. Ayres, 1 cs.
Mexico, 2
Paris, 60
Rouen, 55
Stamboul, 5 5 pks.
Trieste, 1 bl.
Rosario, 1

Magnesium Chloride—
Rouen, 5 t. 1 c. 3 q. £12

Magnesium Sulphate—
Alexandria, 100 kgs.
B. Ayres, 20 brls.
Ciudad Bolivar, 3 cs.
Rio de Janeiro, 15 cks.
Rosario, 100 brls.

Manganese Sulphate.—
Winnipeg, 19 c. £21

Manure—
Santa Cruz de Teneriffe, 39 t. £386
Las Palmas, 6 40
Gd. Canary, 2 28

Oxalic Acid—
Barcelona, 4 t. 6 c. £124

Paint—
Amsterdam, 16 dms.
Antwerp, 20 pks.
Axim, 2 cks.
Bathurst, 48
Calcutta, 137
Fernando Po., 30 kgs.
Hamburg, 4 cks.
Jaffa, 5
Las Palmas, 20 dms.
Leghorn, 24
Manoas, 65 cs.
Matadi, 20 kgs.
Melbourne, 10 pks.
Rotterdam, 11 dms.
St. John's, 23 pks.
St. Thomas, 25
Sierra Leone, 216
Sydney, 15
Tuticorin, 2 cks.
Yokohama, 80 dms.

Painters' Colours—
Boca, 6 cks.
Bombay, 1,463 kgs. 25 cs. 20 dms.
Boston, 19
B. Ayres, 53 cks. 4 brls. 100 cs. 36
Calcutta, 290
Galatz, 1 brl.
Guayquil, 1 cs.
Hong Kong, 20 tcs.
Iquique, 20
Janaino, 1 brl.
Jeremie, 20 kgs.
Limon, 50
Madras, 20
Manaos, 10 brls.
Maranham, 34 1 2 cks.
Melbourne, 22 cs. 1
M. Video, 16 241 dms. 6
New York, 151 bgs. 7 415 brls.
Para, 59 pks. 8
Penang, 20
Philadelphia, 3
Rangoon, 3 cs. 15
R. de Janeiro, 30 kgs. 10 40 dms.
Rotterdam, 50 bgs. 35
Salonica, 2 brls.
Seville, 8
Sierra Leone, 87 kgs. 4
Toronto, 1 22

Paraffin Wax—
Gijon, 20 bgs.
Ibrail, 10
Leghorn, 30
Naples, 300
Palermo, 20
Paris, 10 cs.
Piræus, 10

Phosphorus—
Hiogo, 8 t. 5 c. £1,599
Hong Kong, 14 147
Shanghai, 18 150
Trinidad, 3 25
Yokohama, 2 420

Potash—
Manaos, 5 c. 2 q. £6

Potassium Bichromate—
Paris, 4 t. 11 c. £148
Truro, N.S., 13 15

Potassium Carbonate—
Rio de Janeiro, 15 c. 3 q. £13

Potassium Chlorate—
B. Ayres, 2 t. 15 c. £98
Gothenburg, 2 10 75
Hiogo, 12 10 375
Hong Kong, 15 23
Melbourne, 2 60
New York, 25 750
Oporto, 5 8
Rosario, 8 17
Stockholm, 4 123
Sydney, 2 60

Potassium Cyanide—
Rio de Janeiro, 3 t. 4 c. £326

Potassium Silicate—
Amsterdam, 1 t. 6 c. £10

Salt—
Amsterdam, 190 t.
Antwerp, 385
Baltimore, 300
Bakana, 20
Barbadoes, 25
Benin, 60 13 c.
Boma, 13 8
Boston, 100
B. Ayres, 234 10 150 brls. 100 cs. 200 sks.
Calcutta, 6,879
Cape Town, 60
Chittagong, 1,925
Copenhagen, 100
Ewanga, 234 6 c.
Ghent, 300
Kingston, 2
Landana, 8
Melbourne, 195
Montreal, 20
N. Orleans, 100
New York, 2,001 sks.
Old Calabar, 4,000 bgs.
Opobo, 1,500
Para, 4,000
Punta Arenas, 39 cs.
Rio de Janeiro, 150
Rosario, 132 t. 6 c.
Rotterdam, 220
St. John's, 10 tcs.
Salt Pond, 800 bgs.
Sapeli, 300
Seydisfjords, 142 t.
Sierra Leone, 12,000
Sydney, 500 bgs. 815 t.
Tientsin, 55
Trinidad, 2,000 bgs.
Valparaiso, 3 t. 14 c.
Yokohama, 100 cs.

Salt Cake—
Antwerp, 154 t. 16 c. £200
Baltimore, 40 6 65

Saltpetre—
Ceara, 6 c. £6
Para, 6 t. 2 3 q. 127
Porto Alegre, 9 3 10
San Francisco, 4 1 1 83

Sheep Dip—
Bahia Blanca, 16 t. 16 c. 2 q. £680
B. Ayres, 26 18 3 641
Wellington, 20 dms. 11

Soap—
Addah, 20 bxs.
Aden, 50
Alexandria, 80
Amsterdam, 270 cs.
Antwerp, 100 2
Athens, 2 pks
Axim, 100
Barbadoes, 511
Bathurst, 36
Bereby, 20
Bata, 15
Batanga, 15
Bombay, 68 63 5 crts.
Brass, 100
Brussels, 1,800
B. Ayres, 20
Cairo, 21
Calcutta, 5
Callao, 5
Cameroons, 10
Campo, 15
Cape Town, 1,200 20
Carbonear, 20
Cochin, 100
Constantinople, 45
Corinto, 200
Dominica, 20
E. London, 1,775 5
Fernando Po, 50 60
Gibraltar, 175
Gd. Bassa, 25
Gd. Canary, 210 20
Hobson's Bay, 25 tnks.
Hong Kong, 1,908
Iquique, 1
Karachi, 520
Kingston, 15
Lagos, 10
Las Palmas, 1,361
Limon, 1,000
Madras, 30
Malta, 6 22
Manaos, 980
Mandiji, 20
Melilla, 25
Menado, 1,000
Mollendo, 1
Montego Bay, 50 brls.
Mombassa, 26 pks.
Newfoundland, 12 cs.
New York, 108
Para, 380
Pt. Philip, 24 tnks.
Puerto Barrios, 30
Punta Arenas, 30
Rangoon, 3
Rosario, 2
Rotterdam, 360 80 dms.
St. John's, 20
Savannah, 50
Shanghai, 4,013
Sierra Leone, 25
Sourabaya, 500
Tellicherry, 100
Teneriffe, 1,154
Toronto, 1,000
Valparaiso, 1
Winnebah, 3
Zanzibar, 250 bdls.

Soda—
B. Ayres, 26 cks.
Rio de Janeiro, 50

Soda Ash—
Bahia, 30 kgs.
Barcelona, 20 cks.
Bombay, 8
Boston, 200 bgs.
Calcutta, 40 kgs. 52
Genoa, 200 bxs. 650 bgs. 18
Hiogo, 223
Lattaquia, 50 brls.
Leghorn, 100
Madras, 10
Melbourne, 51
M. Video, 20
Naples, 250
New York, 32 tcs.
Oporto, 18
Philadelphia, 3,040
Piræus, 25 brls.
Rio de Janeiro, 100
Santander, 3
Sydney, 34
Toronto, 96 tcs.

Soda Crystals—
Adelaide, 34 brls.
Alexandria, 50
Almeria, 12 bgs
Bombay, 60 kgs.
Charlotte Town, 50
Don Station, 150
Gd. Canary, 7
Malta, 175
M. Video, 67
Montreal, 100
New York, 125 470 cks.
Philadelphia, 280
Quebec, 10
Rotterdam, 102 bgs.
Truro, 70 kgs.

Sodium Bicarbonate—
Adelaide, 100 brls.
Barbadoes, 100 kgs.
Barranquilla, 300
Beyrout, 35 pks.
Bombay, 120 20 bgs.
Brisbane, 50
B. Ayres, 420
Calcutta, 25
Cape Town, 50
Charlotte Town, 100 dms.
Danzig, 30 1 ck.
Dunkirk, 75
Galatz, 37
Hiogo, 1,600
Kobe, 500
Libau, 15
London, 25
Maracaibo, 10 bgs.
Marseilles, 105
Melbourne, 645
Mexico 20
M. Video, £5
Montreal, 100 250 dms.
Naples, 60
Odessa, 200
Oporto, 40
Paris, 60 7 cks.
Passages, 60
Piræus, 3
Pt. Limon, 10 cs.
Quebec, 50 100 dms.
Rangoon, 8
Rockhampton, 100
St. John's, 40
Santos, 50
Sourabaya, 30
Sydney, 500 15
Varna, 20
Yokohama, 1,500

Sodium Bichromate—
Magog, 6 cks.

Sodium Hyposulphite—
Montreal, 145 kgs.

Sodium Sulphate—
Bombay, 102 bgs.

Starch—
Rio de Janeiro, 18 cks.

Sulphur—
Merriton, Ont. 75 t. 3 c. £320
Barranquilla, 6 43
Pernambuco, 5 14 1 q. 39
Maceio, 14 3 5
Cornwall, 100 4 439
Charlotte Town, 1 5 8
Para, 15 2 6

Sulphuric Acid—
Rio de Janeiro, 1 t. 17 c. 1 q. £13
Rio G. do. Sul, 10 cs. 8

Superphosphates—
Sourabaya, 76 t. 10 c. £1,817
Gandia, 195 2 1 q. 313
Valencia, 25 2 50
Nantes, 171 5 1 318
Corunna, 100 262

Tannic Acid—
Bari, 6 kgs. £12

Tin Oxide—
Palermo, 1 c. 1 q. £5

Varnish—
Antwerp, 14 cks.
Barcelona, 6 6 cs.
B. Ayres, 17
Genoa, 12 pks.
Half Jack, 2 dms.
Hamburg, 2
Leghorn, 4
Melbourne, 16
Para, 3 cs.

White Lead—
Honolulu, 2 cks.
Palermo, 1
Valparaiso, 40 kgs.

Zinc Chloride—
Bombay, 1 t. 3 c. 2 q. £14

MANCHESTER.

Week ending October 5th.

Aniline Colours—
Holland, 6 kgs.
Russia, 1

Carbolic Acid—
France, 2 cks. 80 btls.

Chemicals (*otherwise undescribed*)
Hamburg, 6 kgs. 20 cks.
Montreal, 18 tcs.
Quebec, 52 40 brls.
Rotterdam, 10 kgs.

Coal Products—
Aniline Oil
Russia, 27 dms.
Dyes
Germany, 79 cks.
Naphthylamine
Germany, 29 cks.
Pitch
Belgium, 3,144 c.
Tar
France. 1 ck.
Tar Oil
Belgium. 10 tins
Toluol
Germany, 10 dms.

Colours—
Holland, 1 ck.

Copperas—
Bussorah, 40 brls.

Dyestuffs (*otherwise undescribed*)
Magog, 2 cks.
Montreal, 1 10 cs.
Ottawa, 25 bgs.
Toronto, 20 cks. 100 bgs. 105 bxs.
St. John's, N.B. 1

—
5 cks.
10 cks. 10 brls.
8
—
5 dms.
5 crbys.
rate—
1 ck.
Wax—
2 cs.
4 cks. 1 cs.
Naphthionate—
51 bgs.
36 brls.
13 cks.
oride—
8 cks.

HULL.

ending October 1st.

um Sulphate—
500 bgs.
ag—
rg, 1,016 bgs.
g Powder—
5 cks.
19
Acid—
k, 25 cks.
Soda—
25 cks. 286 dms.
ls (*otherwise undescribed*)
21 cks 154 pks.
9 28 cs. 1
1,728
gen, 14
urg, 2 30
g, 21 110
k, 85 brls.
m, 46 70 cs.
r, 20
4 1
25 3
ay—
10 cks.
ed Oil—
am, 303 c.
, 636
gen, 268
urg, 100
n, 171
g, 693
erg, 100
m, 759
300
104
—
urg, 20 brls.
g, 10 cks.
fs (*otherwise undes.*)—
nia, { 1 ck. / 25 bgs.
urg, 30
gen, 10 bls.
g, 5
Oil—
am, 244 c.
, 16
, 24
gen, 27
urg, 8
g, 388
nia, 306
nsand, 34
—
, 160 t.
, 325 cks.
s' Colours—
3 cks. 1 cs.
lam, 10
, { 39 / 133 dms. / 70 pks.
, 402
3
4
nia, { 6 1 / 4 dms. / 48 pks.
nsand, 48
agen, 2
23 2

Drontheim, 5
Ghent, 6 80 dms.
Gothenburg, 2 1
Hamburg, { 20 1 / 14 pks. / 2 dms.
Kurrachee, 2 404
New York, 108
Riga, 11
Rotterdam, 1 5
Rouen, 7
Stettin, 17
Stockholm, 14 3
Wasa, 50

Pitch—
Antwerp, 259 t.
Dunkirk, 4 cks.

Salt—
Amsterdam, 40 brls.

Soap—
Amsterdam, 5 cs.
Christiania, 1
Copenhagen, 2

Soda—
Harlingen, 203 bgs.

Tallow—
Bombay, 33 cks.
Hamburg, 27
Wasa, 63

Tar—
Amsterdam, 12 brls.
Antwerp, 4 cks.
Copenhagen, 25
Hamburg, 10
Rotterdam, 5
Stettin, 10

Varnish—
Antwerp, 4 cs.
Bergen, 1 ck.
Bordeaux, 2 brls.
Ghent, 2

GLASGOW.

Week ending October 6th.

Ammonium Sulphate—
Bordeaux, 20 t. 5¾ c.
Canada, 20 7½
Genoa, 10 3
Hamburg, 50 12
Italy, 30 16¾
Nantes, 10 4½
Palermo, 5
Rotterdam, 20 5
Rouen, 50 10½

Barytes—
Gothenburg, £20

Boracic Acid—
Melbourne, £96

Borax—
Antwerp, £147

Caoutchouc—
Amsterdam, £30

Carbolic Acid—
Rotterdam, £100

Chemicals (*otherwise undescribed*)
Amsterdam, £3
Rotterdam, 20

Coal Products—
Benzol
Hamburg, 8 t. 5 c.
Pitch
Canada, £128
Hamburg, 300 t. 12 c.
Rotterdam, 11 19
Spezzia, 7,083
Tar
Bombay, £102 10s.
Canada, £117
Danzig, 59 t. 16 c.
Karachi, 45
U.S.A., 53

Cobalt—
Rotterdam, £509

Copperas—
Bombay, £162

Dried Blood—
Rouen, 14 t. 18 c.

Extracts—
Belgium, £67
Victoria, Aust., 51

Gelatine—
Canada. £73

Hydrochloric Acid—
Bombay, £40

Iodine—
Rotterdam, £917

Lead Nitrate—
Montreal, £119
Paris, 200

Linseed Oil—
Adelaide, 1 t. 19½ c.
Canada, 7 15½
Singapore, 4 5¼

Litharge—
Montreal, £334

Logwood—
Canada, £98 9s.
Melbourne, £42

Manganese—
Basle, £105

Manure—
Genoa, 19 t. 14 c.

Nitric Acid—
Bombay, £200

Paint—
Adelaide, £39 18s.
Genoa, 26 7
Hong Kong, £80
Singapore, 34

Painters' Colours—
Algoa Bay, £30
Bombay, 55
Cape Town, £34 10s.
Melbourne, £146
Natal, 138

Paraffin Wax—
Bordeaux, £109
Genoa, 53
Italy, 358
Marseilles, 106
Rotterdam, 15
Rouen, 27
Sicily, 45

Potassium Bichromate—
Antwerp, £238
Nantes, 108
Rouen, 122
U.S.A., 334

Potassium Cyanide—
Melbourne, £436
Singapore, 100

Soap—
Algoa Bay, 1 t. 6¼ c.

Sodium Bichromate—
Antwerp, 2 t. 9¾ c.
Nantes, 2 19
Rouen, 14

Sulphuric Acid—
Bombay, £1,200

Superphosphates—
Palermo, 9 t. 17 c.

Tallow—
Rotterdam, 7 t. 16 c.

Ultramarine—
U.S.A., £42

Varnish—
Shanghai, £65

TYNE.

Week ending October 1st.

Alkali—
Amsterdam, 5 t. 15 c.
Christiania, 1
Gothenburg, 5 8
Rotterdam, 5 12

Ammonium Carbonate—
Halmstadt, 1 t.

Ammonium Chloride—
Gothenburg, 3 t. 5 c.

Antimony—
Hamburg, 5 t.

Arsenic—
Gothenburg. 2 t.

Barium Binoxide—
Rouen, 11 t. 9 c.

Barium Carbonate—
Copenhagen, 2 t.
Hamburg, 177 10 c.
Rotterdam, 102 4
Rouen, 32

Bleaching Powder—
Amsterdam, 12 t. 1 c.
Copenhagen, 18 9
Drontheim, 10 5
Gothenburg, 75 5
Konigsberg, 6 14
Rotterdam. 24 4
San Francisco, 7 6

Carbolic Acid—
Odense, 14 c.

Caustic Soda—
Aalborg, 4 t. 7 c.
Christiania, 4 7
Gothenburg, 65
Hamburg, 19 12

Colours—
Antwerp, 3 c.

Fluor Spar—
Gothenburg, 152 t.

Litharge—
Amsterdam, 6 c.
Gothenburg, 3 t. 16
Hamburg, 2 11
Rotterdam, 5

Magnesia—
Hamburg, 2 t. 6 c.

Paint—
Christiania, 3 t. 5 c.
Gothenburg, 18
Hamburg, 15
Rotterdam, 15

Pitch—
Rouen, 20 t.

Saltpetre—
Aalborg, 5 t.

Soda—
Amsterdam, 4 t. 19 c.
Christiania, 17 13
Rotterdam, 20

Soda Ash—
Bergen, 10 t.
Gothenburg, 36 2 c.
Konigsberg, 142 17

Sodium Hyposulphite—
San Francisco, 14 t. 13 c.

Sodium Sulphate—
Antwerp, 190 t.
Gothenburg, 220

Sulphur—
Amsterdam, 5 t.
Gothenburg, 50

Superphosphate—
Fredrikshaven, 100 t. 1 c.

Tallow—
Hamburg, 3 t. 1 c.

White Lead—
Christiania, 16 c.
Copenhagen, 1 t. 12

GOOLE.

Week ending September 28th.

Caoutchouc—
Boulogne. 18 cs.

Chemicals (*otherwise undescribed*)
Rotterdam, 200 cks.

Coal Products (*otherwise undes.*)—
Amsterdam, 99 cks.
Boulogne, 26
Rotterdam, 2

Dyestuffs (*otherwise undescribed*)
Rotterdam, 100 bgs.

Farina—
Rotterdam, 8 cks.

Logwood—
Hamburg, 20 t.

Manure—
Dunkirk, 200 bgs.
Rotterdam, 288

Painters' Colours—
Amsterdam, 10 cks.
Antwerp, 2
Boulogne, 6 cs.
Ghent, 2
Rotterdam, 2 dms.

Pitch—
Antwerp, 750 t.

GRIMSBY.

Week ending October 1st.

Alkali—
Dieppe, 4 cs.

Caoutchouc—
Port au Prince, 1 cs.

Chemicals (*otherwise undescribed*)
Malmo, 1 ck.

Coal Products (*otherwise undes.*)—
Dieppe, 94 cks.
Hamburg, 10 btls.

Colours—
Port au Prince, 1 cs.

Manure—
Esbjerg, 5,604 bgs.

Painters' Colours—
Antwerp, { 1 ck. 1 cs. 70 pks. / 290 dms.
Dieppe, 2
Hamburg, 2 60

Pitch—
Antwerp, 90 t.

PRICES CURRENT.

WEDNESDAY, Oct. 12, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	9	10	0
,, ,, (grey) Hull .. .. ,,	9	10	0
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	5	0	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	10	15	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	17	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8¾
,, 50/90 ,, ... ,,	0	0	9
Carbolic Acid (crude 60°) .. .. ,,	0	2	0
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	52	16	3
,, Sulphate .. .. ,,	17	5	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80% .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, *Acetate (white ,,)* .. .. ,,	26	0	0
,, ,, *(brown ,,)* .. .. ,,	17	0	0
,, *Carbonate (white lead) pure* .. .. .. ,,	17	10	0
,, *Nitrate* .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	5	0
,, ,, (grey) (ex ship) .. .. ,,	7	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	10	0
Stearine .. .. ,,	25	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	4
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	5	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	15	0
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	7	6
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. nett per ton	13	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	17	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	12	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,, (10 ton lots)	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	4½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	0
,, ,, (Glauber's Salts .. .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	7	0
,, (Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	23	5	0
Tin Crystals .. .. per lb.	0	0	3¾
,, English Ingots .. .. per ton	80	15	0
Zinc (Spelter) .. .. ,,	23	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

HEMICAL TRADE JOURNAL

AND

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VERTISEMENTS.

ED, Young Man as Chemist at Tar and Vitriol North of England; willing to fill up time at book-keeping.—Reply, tion, experience, age, and salary required, and when at liberty, to *cal Trade Journal* Office, Manchester.

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nications for the *Chemical Trade Journal* should be d Cheques and Post Office Orders made payable to—

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tions for the Editor, if intended for insertion in the issue, should reach the office not later than **Tuesday**

Advertisements.

rtisements of Situations Vacant, Premises on Sale or To be Let Wants, and Specific Articles for Sale by Private Contract are *hemical Trade Journal* at the following rates:—

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isements, Announcements in the Directory Columns, and all not prepaid, are charged at the Tariff Rates, which will be for- cation.

ents intended for insertion in the current week's issue he office by **Thursday morning** at the latest.

CURRENT TOPICS.

A HIT AND A MISS.

MANY things are expected from Corporations, and many good changes are effected through their instrumentality, but it is not unjust to expect still more from the Association of Municipal Corporations itself.

Two of the items on the agenda at the last meeting of this Association, held on Wednesday, were of more than ordinary interest to our readers, and we ventured to look upon the furtherance of one of them as a foregone certainty. In regard to the other matter we had our doubts. However, surprises are possible even with such a sedate and august body as the Association of Municipal Corporations, and they have created one this week.

Of the two items, one had reference to the necessity of passing a Bill as early as possible, embodying the recommendations of the recent Petroleum Committee. We should *not* have been surprised if this matter had failed to attract as much attention from the Association as it deserves, especially as there was another important subject to be considered just before it. Our expectations, however, were completely reversed. When the Mayor of Chatham moved that the Government be urged to introduce a Bill in the next session of Parliament to carry into effect the recommendations of the Select Committee on Petroleum, the resolution was seconded by the Town Clerk of Eccles, and, what is more, carried unanimously. Good—very good—and all the more so, seeing the fate that befell the second item of interest with which we shall now deal.

This second item had reference to the compulsory purchase of land for the filtration of sewage, as insisted upon by the Local Government Board.

In the face of the attitude taken up by the Salford Corporation, and the opinions expressed by the heads of other Corporations, we expected to find the Association according their hearty support to the endeavours of these bodies to induce the Local Government Board to give the option of natural or artificial filtration. As far as we can see there was nothing objectionable in the resolution which the Association was requested to adopt. It merely stated that as such advances in the means of sewage disposal have been made, it was felt that the continued demand of the Local Government Board for not less than one acre of filtering land per 2,000 of population is not necessary in all cases, but is often a hardship on sanitary authorities; and that the time had come when some option of method should be allowed to authorities, according to the quality of sewage and local circumstances. As a natural sequence, it was suggested that the law committee should use their utmost influence with the Royal Commission now sitting and the Local Government Board in such manner as it deems best to secure such option. But, strange to say, when this temperate resolution was moved, not only did it fall rather flat, but it actually failed to find a seconder.

We know that some Corporations consider it wiser to submit to the Local Government Board a little longer, than to start open resistance, like the Salford Corporation, but surely the Association of Municipal Corporations have no cause to stand in awe of the Local Government Board, especially as the concession asked for in the resolution was to be solicited indirectly through the Royal Commission on Sewage?

We trust this matter will not be allowed to drop in this unmerited fashion.

It is widely anticipated that the Commission will declare in favour of bacterial treatment, as a principle, and it should be impressed upon the members that to advocate any such system, and yet leave the Local Government Board with the power to compel local authorities to buy worthless land by the acre, will be an absolute absurdity.

SECRET COMMISSIONS.

In the early months of 1897 the London Chamber of Commerce appointed a committee to investigate the vexed question of illicit commissions. At the request of the Chamber we extended through our correspondence columns an invitation to all interested persons to *privately* communicate their experience to the Committee. We also applied directly for the names of the members of the Committee, the publication of which we contended would inspire confidence among intending *révélateurs*. However, our request was not only not complied with, but ignored, and from that day to this we have heard nothing more of the Committee, until this week we chanced indirectly upon the information that the Committee is still in existence, and has been at work; for Mr. O Berry (whom we find is a member of the Committee) has learned enough to warrant his committing himself to the statement that "bribes are given and taken in every trade." It appears, however, that the profession of accountancy at least does not enjoy this distinction. It is something to know this, and still more interesting to learn that the Committee exists, and may, possibly, some day present a report. For sensational matter it should eclipse Dumas.

GOLD OUTPUT IN THE RAND.

STILL ADVANCING.

THE output from the Witwatersrand district during September, as cabled by the Chamber of Mines of the South African Republic, amounts to 384,080 ozs., while from outside districts 24,422 ozs are reported, a total of 408,502 ozs. This shows an increase of 10,217 ozs., as compared with the previous total. No comparison with the corresponding month of 1897 can be made.

	1895. oz.	1896. oz.	1897. oz.	1898. oz.
January	177,463	148,178	209,832	336,577
February ...	169,295	167,018	211,000	321,238
March	184,945	173,952	232,067	347,643
April	186,323	176 707	235,698	353,243
May	194,580	195,008	248,305	365,016
June	200,941	193,640	251,529	365,091
July	199,453	203,873	242,479	382,006
August	203,573	213,418	259,603	398,285
September ..	194,764	202,561	262,150	408,502
October	192,652	199,889	274,175	—
November ..	195,218	201,113	297,124	—
December ..	178,428	206,517	310,712	—
Total ..	2,277,635	2,281,874	3,034,674	3,277,601

THE NEW CONVEYOR CO., LTD.—This firm has sent us their new catalogue of conveyors, colliery and gas works plant. It is strongly bound in red cloth boards, and freely illustrated. It is well worth applying for. The offices are at Smethwick, Birmingham.

The Patent List.

This list is compiled from Official sources in the Manche Technical Laboratory, under the immediate supervision George E. Davis and Alfred R. Davis, who report profession upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Bleaching Paper Pulp. J. Tait. 20,780. Oct. 3.

Manufacture of Cement. J. Clarke, T. G. Stevens, and J. J. Hewitt. 20, Oct. 3.

New Indigo Vat. J. Grossmann. 20,865. Oct. 4.

Refining Petroleum and Obtaining Asphalt. C. B. Forward and J. Davidson. 20,879. Oct. 4.

Extracting Cutch. A. Wilkie. 20,881. Oct. 4.

Non-Conducting Composition. L. Perwitz and W. Behr. 20,956. Oct. 5.

Production of Glycerine. R. E. Green. 20,967. Oct. 5.

Tanning and Finishing Leather. A. J. Boult. 21,064. Oct. 6.

Apparatus for Producing Oxygen. F. Brown. 21,067. Oct. 6.

Manufacture of Hydrosulphurous Acid and Hydrosulphites. J. Grossm 21,126. Oct. 7.

Treating Arsenic, Antimony, and Telluride Sulphurous Ores. W Whiteman. 21,138. Oct. 7.

Luminous Paint. L. E. Gosset. 21,156. Oct. 7.

Sewage Destructor. S. Howard. 21,199. Oct. 8.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS

These abstracts are specially prepared for the Chemical Trade Jour and ALL RIGHTS *of publication are* RESERVED. *This is the ear series of abstracts of Chemical and allied patents accessible to the pu*

A Process for the Electrolytic Separation of Metals. Dr. H. von de L 192, Uerdingerstrasse, Crefeld, Germany. Eng. Pat. 25,246, Oct. 30, 1

Ammonium carbonate is used as an electrolyte, as which it poss the advantage of dissolving such metals as copper, nickel, tin zinc, from iron and manganese, this action being accentuated by presence of air. The process is particularly applicable to recov the valuable metals from copper or nickel-plated goods. If the articl used as anodes in an electrolyte of ammonium carbonate, with a cat of the metal to be dissolved, the latter is removed from the iron and deposited on the cathode without the iron being attacked in way. The tension of the current depends on the materials being tre A saturated solution of ammonium carbonate is preferable.

A New or Improved Alloy of Aluminium and Process for Ma same. P. E. Secretan, 16, Rue Drouot, Paris. Eng. Pat. 24,167. Oc 1897.

In describing the preparation of this alloy great stress is laid the importance of using pure metals only. The copper mus absolutely chemically pure; the aluminium not less than 99·5 per c and free from sodium. Both nickel and phosphorus are used in ma the alloy, and they must be introduced as an alloy of nickel and co and a phosphuret of copper or aluminium. This phosphuret is t introduced into the molten bath of copper, which forms the bas the alloy in a dilute condition. The alloy itself is composed o parts copper; 4 to 5 parts of aluminium; ·0005 part of phosph and ·01 part of nickel. The figures given for the last two ingred represent the maximum amount which it is permissible to intro Four tests as to breaking strain, elasticity and elongation are descri from which it would appear that the phosphorus improves the ge qualities of the alloy, while the nickel increases the limit of elastici 20 per cent. without prejudicing the resistance and elongation test

Improvements in the Manufacture of Potash Salts. O. Imray, Bir Chambers, Chancery Lane, London (communicated by W. T. Gibb Buckingham, Quebec, Canada). Eng. Pat. 24,525. October 22, 1897.

Felspar, or other siliceous potash bearing mineral is decompose being fused in an electric furnace with lime or an alkaline carbo The resulting slag is cooled, or quenched in water, when the po (and alumina if present) pass into solution. When the potash salt to be used for fertilising purposes it is advantageous to mix a na basic phosphate with the felspar, when the resulting slag is ric phosphates as well as potash. If any of the phosphorus is desired free state carbon is added to the charge, and the volatilised phosph collected and condensed.

Improvements in the Manufacture of Portland Cement. O. I Birkbeck Chambers Chancery Lane, London (communicated by La So Anon, des Ciments et Platres de Vilvorde, Vilvorde, Belgium). Eng. 16,173. July 25, 1898.

To obtain a well burnt cement, containing no free lime, and ha a specific gravity of not less than three, it is customary to reckon

grammes of fuel must be used for every 1,000 kilos. of cement d. It is claimed, however, that by burning the cement in an here saturated with sodium chloride the amount of fuel required reduced to 250 kilos. for every 1,000 kilos. of cement. This here of sodium chloride can be produced by sprinkling common r the successive layers of fuel and slurry in the proportion of of salt to 10 tons of cement material to be burnt. It is claimed resulting cement contains no free sodium chloride, and its properties are in no wise impaired.

E GOVERNMENT LABORATORY REPORT.

report of the principal chemist upon the work of the Inland levenue branch of the Government Laboratory for the year March 31, 1898, has been issued as a Blue-book. It shows that nber of analyses and examinations made during the year ed to 65,313, this being a slight increase over the previous year. the analyses in the Revenue departments were those of 4,436 of finished beer taken from 1,888 publicans, 631, or 14 per f the samples being found to have been diluted with water or se adulterated. In one case the dilution was equivalent to 10·9 of water in the barrel of 36 gallons. The results again showed e practice by retailers of diluting *beer* is mostly confined to . In regard to *tobacco*, it is stated that 60 samples taken from cturers and dealers were analysed for adulteration generally, and e found to be genuine and 25 adulterated. The adulterated were of foreign manufacture, being either smuggled cake ish or cut tobacco, which bore no label to show that it had paid per rate of duty. For controlling the amount of moisture in ctured tobacco 11,817 samples were examined in the Govern- aboratory, and 6,760 by the various chemical officers at the out The total quantity of tobacco cleared during the year for con- n in the United Kingdom was 72,388,079 lbs., representing ⅞ oz. per head of the population. This total represents an in- f 2,821,091 lbs. over the quantity cleared in the preceding year. ther pointed out that the consumption has increased in greater an the population during the past ten years by more than 5½ oz. ad. The total amount of manufactured tobacco exported as ndise or deposited in warehouse on drawback during the year 2,601 lbs., and the amount of snuff was 1 339,698 lbs. Of the lbs. of manufactured tobacco no fewer than 100,774 lbs. were nted by cigarettes, and the report says:—"There is an increase lmost every description of both tobacco and snuff, but the most is that in cigarettes, the quantity of which is more than double last year, which, up to that time, was the greatest on record."

INTOXICATING TEMPERANCE DRINKS.

spect to legal proceedings, the report shows that the prosecu- nstituted included 275 for diluting or adulterating beer, the s amounting to £6,125., and 119 for selling so-called "temper- inks" containing excess of proof spirit, penalties to the amount 8. being imposed. For Government departments other than f Inland Revenue and Customs the Laboratory examined 3,480 , 1,516 of these (consisting of *butter*, margarine, cheese, and s) being sent in by the Board of Agriculture. Among other it is shown that the lime and *lemon juice* submitted by the of Trade for approval during the year for use in the merchant as exceptionally good in quality. Out of 460 samples, repre- 56,806 gallons, it was necessary to reject only five samples, re- to 713 gallons. In regard to imported butters the total number les inspected in 1897-98 was 1,271, of which 25 were found to terated (including 20 from Germany), and 11 were of "doubtful In 1896-97 there were 963 samples examined, of which 46 lulterated (including 32 from Germany), and 42 were of "doubt- ly." "It will be seen," the report says on this point, "that there has been a large increase in the number of samples ed, there has been a marked decrease in the number found ated, or regarded as of 'doubtful purity,' when compared with r, which also showed a great improvement upon the previous

FIRE AT ASTRAKAN.—A great fire occurred last week in the um port at Astrakan, caused by the bursting of the boiler of a ump. Two steam pumps, seve nbarges, and 300,000 poods of a residuum were destroyed. Three men are reported killed and injured.

SONAL.—*Messrs. Wilson and Co*, of 1, Creechurch-lane, Leaden- eet, London, inform us that they have been appointed London to Mr. Charles Lemm, of Antwerp. The specialities of the e chemicals, ores, colours, oils, etc,—*Herr Otto Fuerst*, of smarkt 7, Hamburg, has been appointed sole German agent for l-known firm of Messrs. A. De St. Dalmas and Co., Leicester, l plaster makers, who have established a depôt in Hamburg, view of extending their trade in Germany.

Official Memoranda.

(From the Board of Trade Journal.)

TARIFF CHANGES.

Netherlands:—A despatch has been received at the Foreign Office from H.M. Minister at the Hague, transmitting copy and translation of a Royal decree in accordance with which it has been resolved to exempt the payment of excise *duty on salt* when used in manufactories and trading establishment.

United States:—*Ground sulphur* in sacks is exempt from duty under paragraph 674, Act of 1897, as sulphur not otherwise provided for; and sulphur in barrels free of duty under the same paragraph as crude sulphur. *Groun l olive nuts* are liable to duty as a drug advanced in value at the rate of a ¼ cent per pound and 10 per cent. ad valorem under paragraph 20, Act of 1897. *Fancy soap* in the form of artificial fruit is assessed for duty as soap at 15 cents per pound under paragraph 72, Act of 1897. *Scrap leather* of various kinds and dimensions, imported for use as leather, are liable to duty as leather not specially provided for, at 20 per cent. ad valorem under paragraph 438, Act of 1897. The provision "all leather" covers any that has not lost its identity as leather.

BRITISH SALAMMONIAC TRADE WITH RUSSIA.

It having come to the knowledge of the Board of Trade that large quantities of salammoniac are exported from this country to Russia in excess of probable Russian requirements for electric batteries and similar uses, inquiries have been made into the subject through the Foreign Office by H.M. consular officers at St. Petersburg, Odessa, Nicolaieff, Sebastopol, Kieff, Batoum, and Riga, with the following result:—

St. Petersburg.—The Consul-General at St. Petersburg reports that there is undoubtedly a considerable quantity of salammoniac imported annually at St. Petersburg, partly for the interior and partly for the Tentileff works near St. Petersburg, at which smokeless powder is manufactured. He further states tha the has been informed that a portion of this chemical product which figures in the import lists as sal-ammoniac consists really of soda, the competition in the sale of the latter being so keen on the part of the local agents that they endeavour to conceal its identity under another appellation. He adds that it is exceedingly difficult to obtain precise information on the subject, so much secrecy being observed in the trade in connection with the matter in question.

Odessa.—The Acting Consul-General at Odessa reports that he has been unable to discover to what use the salammoniac imported at that port is put other than that connected with electric batteries and similar apparatus. He adds that according to statistics obtained from the custom house, the quantity of salammoniac imported into Odessa in 1897 was 306 tons or somewhat less than half that imported during the previous year.

Nicolaieff.—The Vice-Consul at Nicolaieff states that the local demand for salammoniac is supplied through Odessa, the drug being used for tinning and soldering, besides being employed by chemists. He is further given to understand that it is imported in large quantities into the North of Russia for dyeing, and also for being converted into spirits of ammonia, which is extensively used for household purposes.

Sebastopol.—No salammoniac, or next to none, is imported at this port.

Kieff.—The Consul at Kieff states that salammoniac is imported into this district in two sorts—first, in crystallised powder used for medicinal and electric battery purposes; second, used in mechanical works, etc., principally for soldering purposes. Of the first sort about 300 poods (nearly 5 tons) are used in the Kieff district, and are received from Germany; whilst of the second, close on 100 poods (about 1½ tons) is imported from England.

Batoum.—The Consul at Batoum reports that inquiries made by him at Batoum, Tiflis, and Baku have elicited the fact that the quantity of salammoniac imported into the Caucasus is merely what is required by chemists for electric and other similar uses and that the total amount is therefore quite insignificant.

Riga.—The Consul at Riga states that besides being used for electrical purposes, salammoniac is extensively employed in woollen mills for cleaning cloth and yarns, from shrinking flannels. It also enters very largely into the manufacture of tinplates, and tinners and coppersmiths use it for tinning, soldering, and brazing. He further remarks that it is generally from this salt that liquid ammonia is manufactured, and that a certain quantity is consumed in the manufacture of snuff. He adds that the quantity of salammoniac imported into Riga is small.

SICILIAN SULPHUR TRADE.—During the seven months ending July 31st ult, 4,048,478 cantals of sulphur were exported from Sicily (13 cantals = 1 ton). The total stocks in the whole of Sicily on July 31st, 1898, amounted in the aggregate to 1,918,391 cantals.

Reports of Companies.

CAPE ASBESTOS CO., LTD.

The fifth ordinary general meeting of the Cape Asbestos Co., Ltd., was held last week at Winchester House, Old Broad-street, E C.—Mr. L. Breitmeyer presided, and in moving the adoption of tne report said the accounts showed, after writing off depreciation of machinery and buildings, a loss on the year's operations of £3,808. The result was mainly due to the engineers' strike, which lasted the better part of last year, and also to the ravages of the rinderpest, which made mining somewhat expensive. The introduction of their Blue Cape asbestos was not making the rapid progress in the trade which the promoters at the time of the formatlon of the company hoped for. The article they produced for many special purposes was considered as good and even superior to white, or Canadian, asbestos, but the development of their business had been proceeding slowly. In 1895 their total sales were £9,000., in 1896 they were £15,000., and in 1897 £15,500. If the improvement in their sales continued at the same rate as it had done during the first six months of this year their sales would reach £19,000. —Mr. B. Seimmert seconded the motion.— In reply to questions asked by Mr. Metcalfe and Mr. Moore, the Chairman stated they had been informed by Mr. Oats that the Government would extend the railways to Prieska shortly. In another letter he stated that their prospects were very much more encouraging than they had been in former years. With regard to the premium on the shares, they sold a number of their reserve shares, which were not taken up by the shareholders, but were guaranteed by the well-known firm of Wernher, Beit, and Co , at a premium of 15s. The company's farms were bounded on both sides by the Orange River, and the total area was 12,000 morgen, or, roughly, about 12,000 acres. Then they had the mining rights on a portion of another farm ot about 3,000 or 4,000 acres. The river frontage was, roughly, 16 miles. The company had some orders to cover some boilers for the German warships and also the Emperor's yacht, and if they gave satisfaction he had no doubt that the German navy would give them good orders.—The report was adopted.

WEARDALE LEAD CO , LTD.

The report of the directors for the year ended June 30th last states that the accounts show, after providing for a payment of £500. for rents and royalties, a profit of £563. Two thousand one hundred and twenty-nine tons of ore have been raised and 2,068 tons dressed during the year ; 2,628 tons of ore have been smelted, including 555 tons purchased, and the yield from the mill has been 1,952 tons 11 cwt. 0 qr. 23 lb. of pig lead. The sales of pig lead have been 1,952 tons, which realised £24.616., or an average of £12. 12s 2d. per ton net, delivered at Park Head ; £1,212. has been expended during the year on shafts, levels, machinery, pumps, surface improvements, etc , which has been charged to capital. In compliance with the promise made by the directors at the last annual meeting to devise some scheme by which the liability of the shareholders on the uncalled capital might be reduced, the directors have given considerable attention to this question, and several schemes have been suggested ; but great difficulties are found to exist in carrying any one of them into effect, as it is absolutely necessary that every shareholder and debenture-holder, and also the Ecclesiastical Commissioners, should assent. The board still has the matter under consideration, and are desirous, if possible, of carrying out the wishes of the shareholders. The directors hope that in consideration of the small profit on the year's working, the Commissioners will again consent to take £500. in full discharge of the lead rents and royalties.

Explosion of an Oil Ship.—A remarkable shipping disaster, resulting in the loss of eight lives, occurred at an early hour on Monday morning off Margate. A large sailing ship was proceeding up the Channel, with a tug in attendance to tow her up the Thames when suddenly a flash of light was seen to proceed from her and a dull sound as of an explosion was heard on shore. Almost immediately afterwards flames ran along the vessel from the stern to about midship. Tugs and lifeboats put out from shore with very little delay, and it was ascertained that the ship to which the mishap had occurred was the iron barque *Blengfell*, of Liverpool, bound from New York to London with a cargo of petroleum, in barrels, and a small quantity of naphtha. The vessel was owned by Messrs. John Edgar and Co., of Water-street, Liverpool. According to the testimony of most of the survivors, the naphtha had for some days previous to the disaster been leaking, or throwing off vapour, to such an extent that life on the ship at times was almost unbearable. It is supposed that the inflammable vapour reached the galley fires, and so a train was fired which caused the explosion of the bulk of the cargo in the after-part of the vessel.

POTTERS' LEADLESS GLAZES.

In concluding his investigations into the matter of lead poisoning in the Potteries the "Times" commissioner deals with many matters of general interest, among which his references to leadless glazes are worthy of special mention. He says: "I come now to the question of materials, of which so much has been heard. If the use of lead could be abandoned the whole problem would obviously be solved out of hand. The suggestion of leadless glazes for earthenware was put before the 1893 committee of inquiry, which reported:—'After carefully considering the evidence before us we do not see any immediate prospect of such glazes becoming universally applicable to pottery manufacture.' Since then some advance has been made, but the words of the committee still hold good. It is not for want of leadless glazes. The Potteries seem to be full of them. Every other man you meet knows of one, and every other factory is making experiments ; but from the experimental to the commercial stage is a very long step. The reform committee has one of these glazes, and has produced some specimens of ware with it. Mr. Wilson gave me three plates, printed in three colours, admirably clear, glossy, and bright. So far as I could tell these plates were all that could be desired, and he assured me that they had been subjected to every possible test. He is not a potter, however, and I naturally wanted an expert opinion. I therefore took them to a leading manufacturer who pronounced them 'all right' and asked me to procure some of the glaze. I put him in communication with the author of the recipe, and he has since tested it with some of his own ware. His report is as follows :—

"'The leadless glaze trials are out and surprise me in a measure. The colours are good, but the glaze is harsh and does not "flow" as we call it—leaves lumps. But the quantity was of no use. A whole charge of 5cwt. to 6cwt should be made and properly tested.'

"I have subsequently had this further information. 'The same man has another leadless glaze which I am to try. He only makes small trials. I offered to grind and pay him for a large charge, but he did not see it.' This experience illustrates some of the difficulties surrounding the practical adoption of leadless glazes. The glaze in question is one of the best that have been brought forward, and is decidedly promising, but it has only been tried upon a very small scale, which is perfectly useless for commercial purposes. The owner of the recipe, who is not in a position to carry out a proper trial, is offered one, but declines on the ground, as I understand, that it does not suit his pecuniary views. He is quite right to make as much money as he can out of his idea ; but coming from a 'reform committee' which is calling out upon manufacturers to use leadless glazes, this attitude is a little curious. It suggests a good deal more business than philanthropy. That is the real difficulty of the whole thing. Other leadless glazes are the property of the inventors who want to sell the secret at a price. But manufacturers are also business men, with a great deal more at stake. The materials they use have been arrived at by a long and gradual process of actual experience. Each man has his own compounds, which have proved suitable to his particular trade and his particular market. The varieties are innumerable. Before new ones can be safely adopted they must be equally well tested. Experiments on a small scale are only the beginning, and with one exception leadless glazes have not yet got beyond that stage. This is the leadless glaze used at Messrs. Minton's factory. It is the invention of Mr. Leason, jun., son of the manager, and of course a secret. After prolonged experiment it has been recently applied upon a commercial scale with every promise of success. I saw in the showroom eight complete dinner services which were about to be put on the market, all stamped 'leadless glaze.' But even this does not finally settle the matter, as might be supposed. Mr. Leason is naturally proud of the success, and not likely to underrate its significance, but he told me that time would still be required to see whether the glaze would last. I asked how long. 'Two or three years' he replied. The danger is that the glaze may crack or 'craze,' as it is technically called, which renders the ware unmarketable. And there are several other considerations to be taken into account. The ware has not yet been across the sea, which is a very severe test to glaziers and one of the greatest importance to the Staffordshire manufacturers, whose prosperity largely depends on the superior capacity of their goods to stand the sea air. Any failure in this respect would mean the loss of very large foreign markets. Then a whole ovenful of the leadless glaze has not yet been tried. Other manufacturers attach great importance to this point as a practical test. The success of a glaze depends not merely upon its composition, but upon the firing, which varies in different parts of the oven. In order to be an established success from the commercial point of view the ware ought to come out well from all parts of the oven. Mr. Leason tells me that if there is a demand he will not hesitate to complete an ovenful, but he has not yet done so. Lastly, the glaze has still to be tested on other kinds of ware before its general adoption can be even contemplated. Messrs. Minton are to be congratulated on their enterprise, but a great deal obviously remains to be done before lesser firms, which

d to make large experiments and run the risk of spoiling a goods, are in a position to follow them. The compulsory ss glaze is utterly out of the question at present."

BRICANTS FOR GLASS STOP-COCKS.

By Francis C. Phillips.

ess of modern chemical research work depends frequently the maintenance in position for considerable periods of ns of apparatus in which glass stop-cocks play an important e failure or breakage of a stop-cock often proves to be the ous loss of time or material. The efficiency of a stop-cock quite as much dependent upon the lubricant used for its upon the skilful workmanship of the glass-blower in its

en the common practice to employ an animal fat or a uch fats for lubricating the stop-cock plugs of apparatus of l for work of every description, although it is a fact of ex- t such lubricants are often a source of inconvenience and to the apparatus.

ck lubricant should, besides overcoming friction, satisfy the quirements.—

t should adhere to the glass, and should not be loosened r.

t should be little affected by changes of temperature.

t should not be saponified by alkali.

t should be sufficiently transparent or translucent to render ny clogging of the hole in the stop-cock plug while in use, how whether air spaces occur between the plug and the the stop-cock.

fats are so easily saponified, and adhere so feebly to glass, e seldom suited to the purpose. Pure rubber heated to a sufficient to render it permanently viscid, has advantages t its adhesiveness is lessened by moisture, and it is com- ved by alkali.

ecommends for glass stop-cocks the use of gutta percha a high-boiling mineral oil. This mixture, although not does not adhere well to glass. If thinned down suffi- oil, its lubricating qualities suffer, while the gutta percha ome granular if the mixture is made thicker.

which is sometimes recommended for use alone, does not e glass, and does not overcome friction.

ew to producing a lubricant better adapted to use on glass series of experiments has been tried. Various mixtures of ber with other substances were tested. On mixing to-

	Parts.
Pure rubber	70
Spermaceti	25
Vaseline	5

tained which lubricates well, is translucent, adheres to the not saponifiable. The vaseline was added to the mixture ts softness. The materials were thoroughly mixed while ber being melted first, and the others stirred in. It is well e more vaseline in winter than summer.

preparation, which gave still better results, was made by

	Parts.
Pure rubber	70
Yellow unbleached beeswax	30

er should be pure and fresh. Old rubber, or scraps of bing, whether black or red, will not answer as well and he mixture to become more or less granular and opaque n the stop-cocks. The rubber is best heated in a covered thoroughly melted, and then the wax should be added. ture is well stirred. No vaseline is needed. This lubri- serviceable, protects stop-cocks from sticking, even when ncentrated solutions of caustic alkalies, and is quite trans- n layers. Care should be used not to scorch the mixture ation. Strong alkalies tend in time to loosen and emulsify and the stop-cocks should occasionally be cleaned and re-

n attempted to increase the adhesiveness of such lubricants ion of small quantities of balsam of fir and other strongly stances, but difficulty was found from the tendency to g of the stop-cock plug. The rubber mixtures should not o the air longer than is necessary during the heating, and be preserved in closed bottles.

ixtures of gutta percha with wax and with oils were tried, ta percha tends to cause granulation and diminishes ad- The mixtures above recommended may be readily m parts of glass apparatus which are difficult of access for cleaning by the use of a little concentrated nitric acid, which quickly attacks and loosens it so that it may be washed out by water.

No lubricant is fit for use unless it renders the stop-cock nearly or quite translucent, so as to show whether or not the plug is coated over its entire length.

A thick rubber and wax mixture is especially suited for well-ground glass stop-cocks upon gas vessels which are to be exhausted, and which have therefore to sustain the full pressure of the atmosphere. Such mixtures have been in use for stop-cocks of ordinary burettes in volumetric work during about two years, and have given satisfactory results in every way.—*Jour. Am. Chem. Soc.*

IMPORTS AND EXPORTS FOR SEPTEMBER.

THE Board of Trade returns for the past month are fairly satisfactory as a whole, but the chemical items do not show much improvement. In fact, there is a decrease in the *exports* of alkali, bleach, and copper sulphate. Salt and manure show an increase.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.		Quantities. 1897.	Quantities. 1898.
Margarine	Cwt.	86,668	71,636
Copper Ore and Regulus	Tons	18,370	23,285
Pyrites	,,	49,518	39,293
Tin	Cwt.	41,876	12,968
Alkali	,,	14,483	19,363
Brimstone	,,	16,760	17,530
Dyes, Coal Tar	£.	61,374	63,209
Saltpetre	Cwt.	22,063	13,460
Petroleum	Gall.	14,430,549	23,375,283
Turpentine	Cwt.	55,660	112,960
Guano	Tons.	3,242	1,774
Nitrate of Soda	,,	8,309	4,407
Paraffin Wax	Cwt.	60,654	50,602
Rosin	,,	129,731	226,126
Tallow and Stearine	,,	169,397	111,445
Tar	Barrels	26,732	27,440
Oil Seed Cake	Tons	17,141	25,284
Wood Pulp	,,	26,804	34,731
Borax	Cwt.	—	137

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.		Quantities. 1897.	Quantities. 1898.
Alkali	Cwt.	388,595	309,733
Cement	Tons.	32,134	26,734
Coal and Coke	,,	3,197,400	3,506,218
Copper, all kinds	Cwt.	86,158	82,102
Iron and Steel	Tons.	283,559	269,631
Chemical Manures	,,	38,881	54,108
Oils, seed	,,	3,417	2,817
Salt	,,	46,762	75,000

The Mining Industry of Zululand Mr. J. Jervis Garrard, Acting Commissioner of Mines, in concluding his general report to the Colonial Secretary for Natal on the mining industry of Zululand for 1897, says:—"I cannot but reiterate what I have always maintained—viz., that I feel convinced that Zululand, if properly and diligently prospected, will prove to be one of the most valuable mineral countries in South Africa. Unfortunately, up to the present, it has never had the opportunity of being prospected, except in a few isolated places, and then only in a very indifferent manner; and yet there are many persons who expect to find developed mines in the country and ask how it is that, if the country is so rich, it is not turning out gold or other minerals? I wish to state, therefore, most emphatically that Zululand has not yet been prospected to any extent at all, but that what little has been done is, at any rate, sufficient to warrant capital being put into the country for the purposes of exploration. The geological indications throughout the country are in favour of the occurrence of valuable minerals, the physical conditions of climate, geographical position, and the natural features of the country are in favour of mining, whilst the economic conditions of cheap labour, and proximity to a port, implying cheap supplies, combine to make the costs of mining in Zululand much lower than in almost any other mineral district in South Africa. What is wanted now is the capital with which to make a fresh start in the right direction, the men capable of utilising that capital to the best advantage, and, lastly, the co-operation of the Government to encourage and foster what should prove to be the most important industry of this country for many years to come."

Trade Notes.

Manchester Sewage in the Mersey.—At the meeting of the Rivers Committee, held on Monday, with Alderman Sir Bosdin Leech in the chair, the question was raised of the proposed attempts on the part of the Liverpool Corporation to prevent the Manchester Corporation from discharging the contents of the sludge steamer at the entrance to the Mersey. It will be remembered that some months ago Admiral Sir George Nares, the conservator of the Mersey estuary, gave his consent to the discharge of sludge at a point near the North-west Lightship. The Rivers Committee of the Manchester Corporation, it was stated, are considerably surprised at the proposed procedure, especially in view of the fact that they only deposit sludge far out at sea, beyond a point where it can affect the city of Liverpool, whereas the Liverpool Corporation not only pour their crude sewage into the Mersey close to the Landing-stage, but also discharge all the solid refuse of the city at the same point at which the sludge is deposited from the Manchester steamer. The chairman and deputy-chairman were instructed by the committee to safeguard the interests of Manchester in this matter, and if necessary to take joint action with the Ship Canal authorities.

Society of Chemical Industry: *Liverpool Section*.—The first meeting of the session, 1898-99, will be held at the Chemical Laboratories, University College, on Wednesday, October 26th, 1898, at 7 p.m., when the chairman (Mr. A Smetham, F.I.C.) will deliver an address on "The present position and future prospects of the Chemical manure industry." Members who are willing to read papers are requested to communicate with the local secretary as early as possible.

Society of Chemical Industry: *Nottingham Section*.—The first meeting of the session will be held on Wednesday, October 26th, 1898, in Room No. 23, University College, Nottingham, at 7 p.m., when the following papers will be read:—1. "On arachidic acid in rape oil," by L. Archbutt, F.I.C. 2. "The constants of curcas oil," by L. Archbutt, F.I.C. 3. "Some notes on the constitution and mode of action of the dung bate in leather manufacture," by J. T. Wood.

The Possibilities of Ice Cream.—At the Southwark Police Court, last week, Pantaleoni Manze, London, was summoned before Mr. Fordham, at the instance of St. Olave's Board of Works, for selling ice cream which was injurious to health. Thomas Ashdown said one of the defendant's men was selling ice cream from a barrow. A sample was analysed by Dr. Stevenson, of Guy's Hospital, who certified that there were a million microbes in every cubic centimetre, which was equal to fifteen million in a square inch.—Mr. Fordham: I wonder there is room for anything else.—Mr. Ashdown stated that the analyst also certified that the microbes were probably the result of the ice cream being made from decomposing milk.—The defendant urged that he had used nothing but good materials, and that the milk was quite fresh.—Mr. Fordham said it was horrible that such a mixture should be sold, and fined the defendant £10. and £5. 5s. costs.

The American Tinplate Trust.—It is now stated, in connection with the proposed American Tinplate Trust, to which reference was made in our issue of October 8th, that 250 of the actual millowners, representing 85 per cent. of the whole number, have given in their adhesion to the proposal, and that the concern will be incorporated shortly, with a capital of $30,000,000, or thereabouts. The gentleman who has engineered the trust has had previous experience in this line of business. All the modern and up-to-date mills have expressed their willingness to go with him. It seems that there are now sixty-three separate plants in America, and that thirty-seven of them are furnished with tinning facilities. There are forty-three complete blackplate plants, possessing 262 finished hot mills. With plants at present under construction, the country will boast of 313 hot mills, with a capacity of 9,390,000 boxes per annum. The present output, exclusive of mills not working, is equal to 7,530,000 boxes per annum, or just about the domestic requirements of America itself, irrespective of the export trade, in which South Wales is enabled to participate by virtue of the rebate duty of 99 per cent. on plates re-exported in the shape of cans containing fruit, oil, etc.

Market Reports.

TAR AND AMMONIA PRODUCTS.

The whole range of tar products leans towards weakness with the exception of creosote, which is firm and dearer with a prospect of scarcity. Benzols are now quoted 8½d. for both 90's and 50/90's. Carbolic acids are steady, but crude is about a ½d. easier than last *week, while solvent naphtha has hardly* maintained its position. Anthracene unaltered. Pitch steady at 25s. 6d., f.o.b. East Coast. Ne year, 25s. 6d. to 26s.

Sulphate of ammonia is in a rather peculiar position. Prices a subject to considerable variation in different localities, owing to t demand fluctuating. Forward business is almost at a standstill, an with the exception of Liverpool, most ports have been characterised slackness rather than activity. Nearest closing prompt values are:- Beckton, £ ——; London outside makes, £9. 10s.; Liverpo £9. 13s. 9d. to £9. 15s.; Hull and Leith £9. 10s.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade spot business is fairly active both for home a export trade. Prices as a whole, however, have rather a lower tendency. Quotations for caustic soda, prompt delivery, are unalte at £7. 17s. 6d. for 77%; 74%, £7. 12s. 6d.; 70%, £7. 2s. 6d.; 6 £6. 2s. 6d., nett, f.o b. Liverpool. For future deliveries sales reported at lower rates. Bleaching powder has further declined price for future deliveres to £4. 5s. on rails, spot values being nomin from £4. 15s. to £5. per ton. Chlorate of soda, 3⅞d. per lb.; pot 3¾d. per lb. Sulphate of copper steady at £17. 5s. to £17.10s. for e delivery. Saltcake firm and in request at 26s. bulk f.o.r.. Recovered phur £4 12s. 6d ton. White powdered arsenic in fair demand at £ 10s. to £17 for best brands Acetate of lime, brown, dearer at £5 c i.f.; grey, £7. to £7. 5s. There is fair inquiry for potash, caustic and bonate, and prices are unaltered. Nitrate of soda is firm, especiall forward deliveries. Ammonia salts, as a whole, are quiet. Ani oil and salt unchanged. Carbolic acids are only in poor request, prices are easier. White sugar of lead, £26. Nitrate of lead, £20. c.i.f. Oxalic acid, 3d per lb. Permanganate of potash, 55s per Prussiate of potash firm at 6½d. per lb. Cyanide, 1s. 1d. per Sulpho-cyanides are neglected; zinc salts dearer. In the manu turing districts trade, generally, is reported quiet.

REPORT ON MANURE MATERIAL.

The market is firm in all positions and prices are well maintaine The quotations for high grade mineral phosphates for shipment u June, 1899, are nominal, the production being practically all sold buyers' requirements being covered. The quotations for South Caro rock is about 6d. per unit, c.i.f., good U.K. ports. There is still inq for River Plate bones but at the moment there are no cargoes offer and no business is reported. East Indian bone meal has been sol £5 per ton, ex quay Liverpool, Nov./Dec. shipment, and that is closing value.

Nitrate of soda is firm in all positions, October shipments, tho certain to exceed those for the same month in 1897, not promisin very seriously lessen the shrinkage in visible supply. On spot, ordin quality may be had at 7s. 6d. per cwt., but refined is held for 7s. per cwt.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warr closed at 50s. 1½d.; Middlesbro', 45s. 3½d. cash; and hema 55s. 11½d. Copper firm: Chili bars, G.O.B.'s and G.M. closed at £53. 13s. 9d. to £53. 18s. 9d. cash, and £53. 18s. 9d £54. 3s. 9d. three months. Tin dearer: Straits closed at £81. to £82. cash, and £81. 17s. 6d. to £82. 7s. 6d three mon English ingots, £84. 10s. to £85. Lead steady: Spanish, £1 £13. 1s. 3d.; English, £13. 5s.; Silesian spelter, ordinary, £23 Nickel, 1s. 2½d. Antimony, £36. 10s. to £37. Quicksilver: hands, £7. 5s.; second hands, £7. 4s. *Copper shares* steady: C 5 to 5⅛; Copiapo, 2 7/16 to 2 9/16; Libiola, 1⅞ to 2½; Mason Barry, 2⅞ to 3⅛; Rio Tinto, 29½ to 29⅝; Tharsis, 7⅛ to 7

GLASGOW, Wednesday.—Market firm, and a good busi Scotch done at 50s. 0½d. to 50s. 1½d. cash, and 50s. 3d. to 50s month; buyers, 50s. 1½d. cash; sellers, 50s. 2d. Cleveland do 45s. 4d. to 45s. 6d. month; buyers, 45s. 3½d. cash; sellers 45s Cumberland hematite done at 55s. 11½d. cash; buyers, 55s. 11 cash; sellers, 56s. 0½d. Middlesbrough hematite, buyers, 53s cash; sellers, 53s. 9d.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesd

OILS.—Palm oil is steady, but the business doing is limited. T is only a moderate demand for olive oil, but values are well mainta particularly for spot. Linseed is still quoted 18s. 6d. to 19s. cw Liverpool makes in export casks, and the market closes st Cottonseed is steady, but rather quiet, at 15s. 9d. to 16s. cw Liverpool refined. A small quantity of cocoanut oil has changed during the week at £24. 10. Castor oil is moving but quietly, good seconds Calcutta at 3 15/16d.; first pressure French, 3d. to 3

on the business of brick and tile manufacturers, lead merchants, lime burners, farmers, etc. The subscribers to the memorandum of association are:—T. Pendered, Redwell, Wellingborough, auctioneer; A. Dunmore, Central Farms, Irthlingborough, brick manufacturer; T. H. Higgins, Midland-road, Wellingborough, merchant; G. Henson, Midland-road, Wellingborough, contractor; L. C. Knight, Church-street, Wellingborough, estate agent; J Pendered, Hatton Park-road, Wellingborough, auctioneer; Mrs. A. Dunmore, Central Farms, Wellingborough. Registered office, Irthlingborough, Northants.

Luck's Explosives, Ltd.—CAPITAL £80,000. in £1. shares. This company has been formed to adopt an agreement with A. Luck, L. Henry, and the New Industrial Contract Syndicate, Ltd., and to manufacture and deal in gunpowder, explosives, chemicals, guns, arms, etc. The subscribers to the memorandum of association are:—A. Luck, 38, Mornington-road, N.W., chemist; L. Henry, J.P., Stratheden House, Hyde-park, S W.; W. Mendel, 1, Whittington Avenue, E C., merchant; M. W. Anderson, 143, Leander-road, Brixton, secretary; W. H. Bolton, 14, Christchurch-road, Hampstead, gentleman; H. Dahlmann, 20, Perran-road, Tulse Hill, S.W., accountant; C. A. Rand, 29, Bemerton-street, N., accountant.

Pease and Partners, Ltd.—CAPITAL £1,000,000. in £10. shares. This company has been formed to acquire the business of Pease and Partners, Ltd. (incorporated in 1882), and to carry on the business of colliery and quarry owners, miners, coke and chemical manufacturers, lime burners, brick makers, ironmasters, contractors, etc. The subscribers to the memorandum of association are:—J. W. Pease, Hatton Hall, Guisborough, bart.; D. Dale, West Lodge, Darlington, bart.; A. E. Pease, Pinchinthorpe House, Guisborough, coal owner; J. A. Pease, Snow Hall, Gainford, coal owner; E. L. Pease, Hurworth Moor, Darlington, coal owner; A. F. Pease, Hummersknott, Darlington, coal owner; H. P. Pease, Undercliffe, Great Ayton, ironmaster. Registered office, 92, Northgate, Darlington.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J. Hellewell and B Gledhill, oil merchants, Bradford, under the style of Hellewell and Gledhill.

BANKRUPTCY ACTS, 1883 and 1890

Receiving Order.

Fox, J. A., Macclesfield soap manufacturer.

Adjudication.

Fox, J. A., Maccle-field, soap manufacturer.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 8th.

Acetic Acid—

Germany,	8 pks.	Phillips & Graves
Holland,	167	A. & M. Zimmermann
,,	100	R. W. Greeff & Co.

Acetone—

Germany,	£240	D. T. Domeier & Co.

Alkali—

France,	220 c.	J. Harrison
Belgium,	600	A. Wallace & Co.
France,	60	Spies Brs. & Co.

Alum—

Holland,	550 pks.	J. White

Alumina Sulphate—

Holland,	£23	Tough & Henderson

Ammonium Bromide—

Germany,	£100	R. W. Greeff & Co.

Antimony Ore—

Spain,	12 t.	J. Bamber

Asbestos—

Germany,	£100	Craven & Co.

Barium Chloride—

Holland,	£60	Petri Brs.

Barytes—

Germany,	200 pks.	Burrell & Co.
Belgium,	427	J. L. Lyon & Co.
Germany,	57	W. Harrison & Co.
Holland,	160	,,
Belgium,	100	,,
,,	150	J. W. Cook & Co. Ld.
Germany,	48	J. L. Lyon & Co.

Bitumen—

France,	5 t.	Wilkins, Campbell & Co.

Bleaching Powder—

Holland,	£75	J. M. Steel & Co.

Bone Meal—

E. Indies,	100 t.	Walker, Howard & Co
,,	180	E. Packard & Co., Ld.
,,	100	W. Norfolk Farmers' M. Co.

Bones—

Melbourne,	8 t.	C. M. Lampson & Co.
Queensland,	1	Culverwell, Brooks & Co
Melbourne,	10	,,
U. States,	14	Hicks, Nash & Co.

Caoutchouc—

Straits,	105 c.	Prop. Bull Wf.
B. Honduras,	9	,,
Ceylon,	12	Prop. Hay's Wf.
Straits,	377	E. Boustead & Co.
,,	37	W. Pope & Co.
,,	380	Soundy & Sons
,,	267	Kleinwort, Sons & Co.
,,	505	Gilman Brs. & Co.
B. W. I.,	2	Prop. Bull Wf.
Holland,	*26*	*Brookes & Green*
Straits,	*570*	*H. W. Jewsbury & Co.*
,,	62	E. Boustead & Co.
,,	57	Elkan & Co.
,,	384	L. & I. D. Jt. Co.
Madagascar,	7	,,
Aden,	2	,,
Rangoon,	15	Prop. Hay's Wf.
Sydney,	21	McIlwraith, McEacharn & Co., Ld.
Zanzibar,	75	L. & I. D. Jt. Co.
,,	9	Clarke & Smith

Castor Oil—

France,	24 brls.	Kumpf & Eckenstein

Caustic Potash—

Germany,	42 dms.	J. M. Steel & Co.

Chemicals (*otherwise undescribed*)

Germany,	£637	A. & M. Zimmermann
,,	465	L. & I. D. Jt. Co.
A Turkey,	10,000 c.	A. Frey & Co., Ld.
Belgium,	26	T. Palmer
France,	68	Mory & Co.
Holland,	10	T. H. Lee
Belgium,	357	,,
,,	30	John Cockerill Line
Norway,	257	R. Greening
Germany,	10	Butler's Wf., Ld.
Belgium,	350	B. & F. Wf. Co. Ld.
Germany,	7	Blagden, Waugh & Co.
Germany,	100	R. W. Greeff & Co.
,,	13	J. B. Siefer
,,	10	Grosscurth & Luboldt

Cream of Tartar—

Holland,	40 pks.	Kirkpatrick, Barr & Co.
France,	12	C. Atkins & Nisbet
Germany,	5	L. C. Bacon & Co.
France,	15	B. & F. Wf. Co. Ld.
Germany,	20	,,
France,	2	H Johnson & Sons

Dyestuffs—

Aniline

Holland,	1 pk.	Pickford & Co.

Annatto

Ceylon,	62 pks.	Hoare, Wilson & Co.
France,	50	C. Faust & Co.

Cochineal

Canaries,	6 pks.	Swanston & Co.

Cutch

Rangoon,	692 pks.	Prop. Midd Wf.

Extracts

France,	25 pks.	B. & F. Wf. Co. Ld.
,,	100	L. J. Levenstein & Sons
,,	96	Frankenstein & Co.

Gambier

Straits,	494 pks.	Gilman Brs & Co.
,,	1,448	Adamson, Gillilan & Co.
	455	S. Barrow & Bro., Ld.

Indigo

E. Indies,	1 chst.	L. & I. D. Jt. Co.

Kamela

E. Indies,	8 pks.	G. & H. Green

Myrabolams

E. Indies,	1,992 pks.	P. & O. C
,,	670	L. & I. D. Jt. Co.

Tanners' Bark

Melbourne,	104 t.	Escombe Brs. & Co.

Turmeric

E. Indies,	82 pks.	L. & I. D. Jt. Co.
,,	109	Lucas & Spencer's Wf.

Valonia

A. Turkey,	19 t.	Union L. Co., Ld
,,	60	Adam Brs.

Dyestuffs (*otherwise undes.*)—

B. W. I.,	8 t.	Flack, Chandler & Co.
Natal,	24	A. & W. Nesbitt
Adelaide,	21	Baxter & Hoare

Farina—

Germany,	10 pks.	R. Windmuller
Holland,	30	J. Barber & Co.

Glucose—

U. States,	1,200 pks.	1,200 cwts.	L. & I D. Jt. Co
,,	50	28	J. Keiller & Son, Ld.
,,	50	290	S. E. Rail
,,	2,000	2,000	Fellows, Morton & Co.
,,	1,250	1,250	Pearce, Pelly, & Co.
,,	300	300	Thames S. T. & L. Co.
,,	250	250	A. J. Humphrey
,,	200	1,160	Deering & Robottom
,,	250	1,434	W. Grose & Co
,,	1,000	1,000	Oblenschlager Brs.
,,	9,144	17,455	R. G. Hall & Co.
,,	50	290	A. E. Piggott & Co.
,,	1,250	1,250	Pollitzer Brs. & Co.
,,	1,000	1,000	L. Norman & Co.
,,	200	200	C. S. Lovell
,,	500	500	C. F. Webster & Co.
,,	800	800	Barrett Tagant & Co.
France,	100	100	,,
,,	200	200	L. Norman & Co.
U. States,	400	400	Humphrey & Co.
,,	750	750	E. Thompson & Co.
,,	26	140	Lon. & Til. Lags. C. & D. Co.

Glue—

Germany,	£98	L. & I. D. Jt. Co.
Belgium,	876	R. G. Hall & Co.
Germany,	600	Butler's Wf., Ld.
U. States,	63	Armour & Co.
Holland,	37	T. H. Lee
Germany,	27	Phillipps & Graves
France,	104	J. Harrison
,,	10	B. & F. Wf. Co.
Germany,	34	M. Dr. Co.
France,	210	D. Mognus & Co.

Glue Stock—

Melbourne,	10 bls.	Hicks, Nash, & Co.
Sydney,	19	Deering & Robottom
,,	19	W. France & Co., Ld.
,,	1,078	Anning & Cubb
Germany,	114	W. Balchin, Ld.
,,	136	Butler's Wf., Ld.
Belgium,	21	R. Davies & Co.
Holland,	39	Hicks, Nash, & Co.
France,	50	T. Trapp & Sons
,,	2 bskts.	E. Flageollet & Co.

Glycerine—

Holland,	£500	J. Barber & Co.

Infusorial Earth—

Germany,	£12	C. Webster
,,	29	Snowden, Sons, & Co.
,,	7	Butler's Wf., Ld.

Iron Bromide—

Germany,	10 cks.	A. & M. Zimmermann

Lead Acetate—

France,	£130	Beresford & Co.
Germany,	130	F. Bochin

Litharge—

Holland,	15 pks.	J. Owen

Lithopone—

Germany,	4 pks.	Taylor Brs.

Methyl Alcohol—

Sweden,	12 dms.	Stein Brs.
Germany,	30	W. Isaard
France,	9	Lister & Biggs
,,	5 cks.	E. Catlin

Mica—

E. Indies,	£320	W. M. Smith & Son
,,	160	Dundee, Perth, & London S. Co.

Molasses—

B. Guiana,	495 bgs.	1,100 c.	R. & J. J. Kirke
U. States,	110 cks.	652	Falbenberg & Hosse
,,	325		— L. & T. Ltge. C. & D. Co.
,,	250	1,396	J. Fersey

Ochre—

Holland,	10 pks.	Phillipps & Graves
Germany,	4	Butler's Wf., Ld.

Oxalic Acid—

Holland,	10 pks.	R. W. Greeff & Co.

Paraffin Scale—

U. States,	1,042 brls.	Anglo-American Oil Co.

Paraffin Wax—
U. States, 1,037 cs. Anglo-American Oil Co.
,, 600 brls. H. Hill & Sons
Phosphates—
Holland, 150 t. West & Penrose
France, 142 Anglo-Contl. Guano Works
Pitch—
Belgium, 12 cks. Poth, Hille, & Co.
N. Russia, 300 brls. Abbey, Abbey, & Co.
,, 342 R. G. Hall & Co.
Plumbago—
Germany, 63 cks. B. Gallaway
,, 12 Morgan Crucible Co.
U. States, 46 cs. Lunham & Moore
Ceylon, 814 brls. J. Thredder, Son, & Co.
,, 342 R. G. Hall & Co.
Potassium Carbonate—
France, 28 c. J. A. Reid
Germany, 200 J. M. Steel & Co.
,, 1 M. Dk. Co.
Potassium Cyanide—
Holland, £182 Hernu, Peron, & Co.
Potassium Oxychloride—
Sweden, 100 kgs. G. Boor & Co.
Potassium Prussiate—
France, 24 cks. Blagden, Waugh, & Co.
Pyrites—
Spain, 2,132 t. C. Tennant, Sons, & Co.
,, 700 Anderson, Anderson, & Co.
Portugal, 1,300 Mason & Barry
Rosin—
U. States, 7,831 brls. Prod. Broker's Co.
Salicylic Acid—
Germany, 25 pks. R. W. Greeff & Co.
Saltpetre—
Germany, 16 cks. L. & I. D. Jt. Co.
,, 42 J. Hall & Son, Ld.
,, 16 pks. P. Hecker & Co.
E. Indies, 318 bgs. Lucas & Spencer's Wf.
,, 336 Lon & Til. Ltge. C. & D. Co.
Soap—
Portugal, £52 J. W. Cook & Co., Ld.
Sydney, 28 L. & I. D. Jt. Co.
Spain, 60 J. Knill & Co.
Holland, 52 Phillipps & Graves
,, 20 A. G. Robinson & Co.
Soda Ash—
Belgium, 2,060 c. R. Waters
Holland, 1,600 ,,
U. States, 5,000 F. W. Berk & Co., Ld.
Sodium Bicarbonate—
Holland, 20 cks. J. Barber & Co.
Sodium Hyposulphite—
Germany, 12 cks. Deering & Robottom
Holland, 300 c. R. W. Greeff & Co.
Sodium Prussiate—
Belgium, 39 cks. Blagden, Waugh, & Co.
Starch—
Holland, 100 pks. Phillipps & Graves
,, 40 Hernu, Peron, & Co.
,, 1,130 Little & Johnston
,, 250 E. Olyett & Sons
U. States, 2,600 Union Ltge. Co., Ld.
,, 100 C. Tennant, Sons, & Co.
,, 100 L. Sutro & Co.
,, 2,000 J. Forsey
,, 20 Beck & Pollitzer
Germany, 80 Phillipps & Graves
,, 4,354 Horne & Co.
,, 16 Butler's Wf., Ld.
Belgium, 380 T. Ronaldson & Co.
,, 167 John Cockerill Line
,, 60 Taylor Brs.
,, 134 Leach & Co.
,, 975 E. & T. Pink
France, 20 W. E. Cole
,, 10 L. P. D. Co.
,, 400 Prprs. Dowgate Dk.
Sydney, 160 Horne & Co.
Stearine—
France, 300 bgs. G. Boor & Co.
Belgium, 756 H. Hill & Sons
,, 2 cks. T. H. Lee
Holland, 17 W. Von Romberg
U. States, 68 L. & I. D. Jt. Co.
Strontia—
Holland, £35 J. Owen
Sulphur—
Spain, 200 t. J. Forster
Tannin—
Germany, £70 R. W. Greeff & Co.

Tar—
Russia, 62 brls. Linck, Moeller, & Co.
,, 11 F. & S. Chiesman & Co.
U. States, 700 Prod. Brokers' Co., Ld.
,, 450 T. Nickels & Co.
,, 500 Stanton, Hill, & Co.
Germany, 125 Prod. Brokers' Co., Ld.
Holland, 10 Dusset Brs. & Co.
Tartaric Acid—
Spain, 10 pks. Major & Field
Holland, 2 F. C. Devon & Co.
,, 2 Kirkpatrick, Barr, & Co.
Ultramarine—
Belgium, 17 pks W. Harrison & Co.
Holland, 16 J. Barber & Co.
Germany, 8 H. Brooks & Co.
,, 10 Steinhoff, Sons, & Co.
Varnish—
U. States, 2 pks. Beck & Pollitzer
France, 2 Bennett S. S. Co.
Germany, 39 L. & N.-W. Rly. Co.
,, 31 Butler's Wf., Ld.
Holland, 1 Randall Brs.
,, 1 Phillipps & Graves
Belgium, 2 Wilson & Co.
Verdigris—
France, 3 pks. B. & F. Wf. Co.
Waste Salt—
Germany, 5 t. J. Norrenberg & Co.
White Lead—
Austria, 10 pks. T. Palmer
Belgium, 49 T. & W. Farmiloe, Ld.
,, 52 J. L. Lyon & Co.
,, 23 Perkins & Homer
Holland, 2 J. Matton
,, 62 F. G. Clifford
,, 20 A. & M. Zimmermann
France, 17 J. Watt & Son
Germany, 15 Randall Brs.
,, 106 Wilkinson, Heywood, & Co.
Wolfram Ore—
Sydney, 3 t. H. Bath & Son
Wood Pulp—
Norway, 1,616 pks. J. Sharp
,, 400 Johnsen & Jorgensen
Sweden, 180 G. Hagborg & Co.
,, 407 Tough & Henderson
,, 326 W. G. Taylor & Co., Ld.
,, 400 Raby & Mather
,, 321 M. Dk. Co.
Canada, 360 A. E. Reed & Co.
,, 1,075 Becker & Co.
Belgium, 2,044 J. Harrison
Zinc Oxide—
U. States, 735 pks. M. Ashby, Ld.
Holland, 20 ,,
,, 105 J. Matton
,, 8 R. W. Greeff & Co.
Germany, 50 Soundy & Sons
,, 20 R. W. Greeff & Co.
Zinc Sulphate—
Sweden, £30 M. Dk. Co.

LIVERPOOL.

Week ending October 6th.

Albumen—
Hamburg, 1 cs.
Asbestos—
Rotterdam, 2 cs.
Barytes—
Antwerp, 287 bgs. / 33 cks.
Rotterdam, 12 sks.
Bog Ore—
Antwerp, qty.
Bones—
Maranham, 5 bgs. Gunston & Co.
Burnt Ore—
Lisbon, 90 t.
Caoutchouc—
Hamburg, 3 bls.
Chrome Ore—
Symrna, 128 t.
Colours—
Stettin, 5 cks. Evans & Sons
,, 50
Fiume, 100 bgs.
Cottonseed Oil—
Boston, 100 brls
New York, 162
N. Orleans, 1,251

Cream of Tartar—
Bordeaux, 42 cks.
Dyestuffs—
Argols
Bordeaux, 11 cks.
Cutch
Rangoon, 420 bxs.
Extracts
Nantes, 550 cks.
Fiume, 240 brls. De Clermont & Co.
,, 918
Baltimore, 25 McArthur & Co.
Valonia
Smyrna, 2,045 ktls. G. Essayan & Co.
,, 46 bgs.
,, 284 Barry Brs.
Farina—
Fiume, 50 bgs. 15 bls.
Glucose—
Boston, 200 brls.
Glue—
Fiume, 4 cks. 200 bls.
Hamburg, 100 bgs.
Infusorial Earth—
Hamburg, 309 bgs.
Lactic Acid—
Boston, 5 kgs. Taylor
12 brls. & Co.
Limestone—
Antwerp, 1 cs. J. T. Fletcher & Co.
Lithopone—
Hamburg, 2 cks.
Magnesite—
Fiume, 13 cs.
Mineral White—
Bordeaux, 50 bgs. R J. Francis & Co.
Oxalic Acid—
Hamburg, 1 ck.
Paraffin Scale—
New York, 768 brls. Thompson & Bedford
Plumbago—
Genoa, 300 bgs.
Potash—
Hamburg, 19 cks. 10 cs.
Rotterdam, 77
Pyrites—
Huelva, 4,300 t. Matheson & Co.
Saltpetre—
Hamburg, 5 brls.
Soap—
Naples, 312 cs.
Bari, 50 brls. 198
Boston, 15
N. Orleans, 800
Rotterdam, 9
Bordeaux, 2 R. J. Francis & Co.
Soapstone—
Genoa, 200 bgs.
Bordeaux, 100 bgs. Geo. G. Blackwell, Sons & Co.
Starch—
Boston, 400 bgs.
Antwerp, 80 cs. J. T. Fletcher & Co.
,, 260
Rotterdam, 60 Browne, Geveke & Co
,, 60
Stearine—
Antwerp, 64 bgs.
Sulphur Oil—
Bari, 61 brls.
Tallow—
New York, 100 tcs.
Hankow, 1,468 cs.
Boston, 75
Tartar—
Ancona, 1 ck.
Tartaric Acid—
Hamburg, 8 cks
Tin Ashes—
Genoa, 133 bgs.
Ultramarine—
Hamburg, 5 cks.
Wood Pulp—
Quebec, 1,398 bls. A. Woothenie & Co.
,, 3,150 A. Rice & Co.
Zinc Oxide—
Antwerp, 95 brls.
Zinc White—
Stettin 50 cks

MANCHESTER.

Week ending October 8th.

Acetate of Lime—
New York, 477 bgs.
Acetic Acid—
Rotterdam, 50 pks.
Alizarine—
Rotterdam, 8 cks.,
Aniline Salts—
Rotterdam, 8 cks.
Antimony Salts—
Rotterdam. 6 cks.
Arachide Oil—
Rotterdam, 1 ck.
Barytes—
Antwerp, 220 bgs.
Bog Ore—
Rotterdam, qty.
Cement—
Antwerp, 1,700 bgs.
Chemicals (*otherwise undescribed*)
Hamburg, 8 cks.
Colours—
Antwerp, 8 cks.
Ghent, 2 brls.
Hamburg, 11 7 cs.
Rotterdam, 69 19 12 bxs / 84 brls.
Cream of Tartar—
Rotterdam, 4 cks.
Extracts—
New York, 20 brls. 25 bxs.
Farina—
Hamburg, 50 bgs.
Fustic—
Corinto, 514 t. D. Midgley & Sons
Halifax, 347 pcs.
Glucose—
New York, 250 brls.
Glue—
Antwerp, 40 bls.
Rotterdam, 10 bgs.
Lead Acetate—
Hamburg, 6 cks.
Limestone—
Antwerp, 1 cs.
Ghent, 5
Logwood—
Halifax, 10 cks.
Paraffin Scale—
New York, 481 cs. 830 bls.
Pitch—
Hamburg, 44 cks.
Potash—
Antwerp, 20 dms.
Hamburg, 31 cks.
Rotterdam, 10
Soap—
Bordeaux, 23 cs. J. & P. Hutchison
Sodium Nitrate—
Rotterdam, 12 cks.
Sodium Phosphate—
Antwerp, 12 cks.
Starch—
Antwerp, 390 cs.
Hamburg, 50 cks.
Montreal, 100 bgs.
New York. 700
Rotterdam, 114
Stearine—
Antwerp, 76 bgs.
Sulphuric Acid—
Rotterdam, 5 btls.
Waste Salt—
Hamburg, 1,000 bgs. and qty.
Wood Pulp—
Christiania, 5,265 bls. W. H. Ingram
,, 1,500
Drontheim, 3,676 101 hf.-bls.
Fredrikshald, 1,250
Gothenburg, 620
Halifax, 1,040
Rotterdam, 50
Zinc Oxide—
Rotterdam, 60 brls.

HULL.

Week ending October 8th.

Barytes—
Antwerp, 33 cks. H. F. Pudsey
Chemicals (*otherwise undescribed*)
Antwerp, 19 pks. Wilson, Sons, & Co., Ld.
Hamburg, 5 cs. ,,
New York 2 dms ,,

Colours—
Antwerp, 5 cks. Bailey & Leetham, Ld.
" 19 pks Wilson, Sons, & Co., Ld.
Danzig, 5 cks. "
Ghent, 8 "
Rotterdam, 3 12 bxs. / 19 pks, 85 brls. Hull & Netherlands S. S. Co.

Cottonseed Oil—
Rotterdam, 10 tcs. Hull & Netherlands S. S. Co.

Cream of Tartar—
Bremen, 15 cks. 20 brls. Veltmann & Co.

Cryolite—
Copenhagen, 64 cks. Wilson, Sons, & Co., Ld.

Dyestuffs—
Indigo
Hamburg, 7 cs. Wilson, Sons, & Co., Ld.
Rotterdam, 8 chts. Hull & Netherlands S. S. Co.

Dyestuffs *(otherwise undescribed)*
Hamburg, 30 pks. Wilson, Sons, & Co., Ld.

Glucose—
Rotterdam, 40 bgs. Hull & Netherlands S. S. Co.

Glue—
Hamburg, 22 bgs. Wilson, Sons, & Co., Ld.
Rouen, 31 cks. Rawson & Robinson

Glue Stock—
Ghent, 185 bgs. Wilson, Sons, & Co., Ld.

Limestone—
Antwerp, 5 crts. Wilson, Sons, & Co., Ld.

Lithopone—
Hamburg, 10 cks.

Pitch—
Archangel, 300 cks.

Potash—
Hamburg, 20 cks. Bailey & Leetham, Ld.

Soda—
Antwerp, 141 bgs. Wilson, Sons, & Co., Ld.
Ghent, 250 "

Starch—
Antwerp, 200 cs. Bailey & Leetham, Ld.
Bremen, 1,713 Veltmann & Co.
Ghent, 180 Wilson, Sons, & Co , Ld.
Rotterdam, 30 Hull & Netherlands S. S. Co.

Stearine—
Antwerp, 52 bgs. Wilson, Sons, & Co., Ld.

Tallow—
Dunkirk, 256 cks. Wilson, Sons, & Co., Ld.
Hamburg, 83 tcs. "
Rouen, 14 bgs. Rawson & Robinson

Tar—
Archangel, 1,020 brls.
Danzig, 18
Libau, 1 Redfern & Chatterton

Turpentine—
Libau, 103 brls. Redfern & Chatterton
" 10 Wilson, Sons, & Co., Ld.

Ultramarine—
Bremen, 1 ck. Veltmann & Co.
1 cs.
" 4 cks. J. & T. Seddon

Waste Salt—
Hamburg, qty. 500 bgs. Bailey & Leetham, Ld.

White Lead—
Antwerp, 26 cks. Bailey & Leetham. Ld.
Rotterdam, 30 Hull & Netherlands S. S. Co.

Wood Pulp—
Gothenburg, 25 bls.

GLASGOW.

Week ending October 13th.

Acetate of Lime—
Philadelphia, 279 bgs.

Asbestos—
Genoa, 22 pks.

Barium Sulphate—
Antwerp, 33 cks. 200 bgs

Barytes—
Rotterdam, 221 pks. J. Rankine & Son

Castor Oil—
Antwerp, 139 cks.

Chemicals *(otherwise undescribed)*
Rotterdam, 9 cks.

Citric Acid—
Messina, 8 cks.

Colours—
Rotterdam, 8 cks. 6 bxs. 24 brls.
" 30 cs. J. Rankine & Son
Hamburg, 1 ck.

Dyestuffs—
Alizarine
Rotterdam, 109 cks.
Aniline
Rotterdam, 5 cks. 9 cs.
Amsterdam, 1 ck. J. Rankine & Son
Extracts
Antwerp, 18 cks.
Shumac
Palermo, 670 bgs.

Dyestuffs *(otherwise undescribed)*
Hamburg, 225 bgs.

Fluoric Acid—
Hamburg, 1 ck.

Gelatine—
Hamburg, 5 cs.

Glucose—
Boston, 1 brl.

Glue—
Antwerp, 4 cks. 19 bls
Rotterdam, 80 bgs.

Infusorial Earth—
Hamburg, 168 bgs.

Ochre—
Rotterdam, 5 cks.
Hamburg, 1

Oxalic Acid—
Hamburg, 6 cks.
Rotterdam, 6 J. Rankine & Son

Paint—
New York, 47 kgs.

Painters' Colours—
Antwerp, 4 cks.

Paraffin Scale—
Rangoon, 78 bgs. P. Henderson & Co.

Paraffin Wax—
Philadelphia, 20 cs.

Plumbago—
Genoa, 40 bgs.

Potassium Oxalate—
Rotterdam, 3 cks.

Pumice Stone—
Messina, 30 bgs.

Pyrites—
Huelva, 1,673 t. Tharsis Sulphur & Copper Co. Ld.

Saltpetre—
Hamburg, 22 cks.

Soap—
New York, 2,500 bxs.
Genoa, 28 cs.

Sodium Prussiate—
Antwerp, 16 cks.

Starch—
Antwerp, 170 cs.
New York, 100 sks.
Rotterdam, 44 cs. J. Rankine & Son

Stearine—
Amsterdam, 64 bgs.
Boston, 50 tcs.
Antwerp, 19 bgs.

Tallow—
New York, 65 trcs.
Philadelphia, 77 brls.

Tartar Emetic—
Hamburg, 2 cks.

Varnish—
New York, 4 brls.
Antwerp, 2 cks.

Waste Salt—
Hamburg, 130 cks. / 200 bgs.

White Lead—
Antwerp, 12 cks.

Wood Pulp—
Hamburg, 1,000 bls.
Montreal, 150
Boston, 180
Christiania, 127

Zinc Oxide—
New York, 100 brls.
Rotterdam, 15 cks.

TYNE.

Week ending October 8th.

Acids—
Hamburg, 2 cs. Tyne S. S. Co.

Arsenic—
Hamburg, 10 cks. Tyne S. S. Co.

Barium—
Hamburg, 24 bskts. Tyne S. S. Co.

Barytes—
Antwerp, 100 bgs. Tyne S. S. Co.

Chemicals *(otherwise unaescribea)*
Antwerp, 35 brls. Tyne S. S. Co.

Colours—
Antwerp, 2 cks. Tyne S. S. Co.
Hamburg, 10 "
Rotterdam, 1 bx. "

Dyestuffs *(otherwise undescribea)*
Antwerp, 523 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 1 crte. Tyne S. S. Co.

Potash—
Hamburg, 1 ck. Tyne S. S. Co.

Salt—
Hamburg, 50 bgs. Tyne S. S. Co.

Soap—
Rotterdam, 3 cs. Tyne S. S. Co.

Starch—
Rotterdam, 98 cs. Tyne S. S. Co.

Tar—
Archangel, 2,400 brls.

Wood Pulp—
Christiania, 100 bls. P. H. Matthiessen & Co.

GOOLE.

Week ending October 5th.

Alizarine—
Rotterdam, 78 cks. 5 cs. 38 bdls.

Antimony—
Boulogne, 5 cks.

Caoutchouc—
Boulogne, 1 ck.

Chemicals *(otherwise undescribed)*
Boulogne, 1 ck.

Colours—
Hamburg, 4 cks. 3 cs.

Dyestuffs *(otherwise undescribed)*
Amsterdam, 7 cks. 1 cs.
Antwerp, 1,172 bgs. / 2 cks.
Boulogne, 8 2 160 pks.
Rotterdam, 276 63

Extracts—
Hamburg, 10 cks.

Farina—
Hamburg, 100 bgs.

Glucose—
Calais, 100 bgs.

Lead Acetate—
Hamburg, 13 cks.

Phosphate Rock—
Ghent, 2,300 bgs.

Potash—
Calais, 36 dms.
Dunkirk, 1 ck. 52
Hamburg, 10 20 cs.

Salt—
Hamburg, 5 cs.

Saltpetre—
Rotterdam, 200 bgs.

Starch—
Antwerp, 18 cs.
Ghent, 81 bxs.

Tartar—
Rotterdam, 6 cks.

White Lead—
Antwerp, 4 cks.

Wood Pulp—
Gothenburg, 3,700 bs.
Rotterdam, 54

GRIMSBY.

Week ending October 8th.

Barytes—
Rotterdam, 50 bgs.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 1
Rotterdam, 1

Chemicals *(otherwise undescribed)*
Antwerp, 1 ck. 3 cs.
Hamburg, 2 3

Colours—
Antwerp, 3 cks. 111 pks
Hamburg, 13 6 cs. 46
Rotterdam, 30 bgs. / 3 cks. 2

Farina—
Hamburg, 25 bgs.

Salt—
Hamburg, 521 bgs.

Starch—
Antwerp, 80 cs.

Varnish—
Antwerp, 10 cs.

Zinc Ashes—
Antwerp, 3 cks.
Rotterdam, 10

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 12th.

Acids—
Bahia, 24 cs. £63

Ammonia—
Cape Town, 3 c. £12
Calcutta, 3 cks. 11
Pt. Elizabeth, 26 cs. 38
Durban, 16 23

Ammonia (Anhydrous)—
Sydney, 50 cyldrs. £100
Rotterdam, 22 100

Ammonium Carbonate—
Adelaide, 6 c. £10
Cologne, 1 t. 10 37
Bombay, 1 30
Rosario, 10 16
Stettin, 11 13

Ammonium Chloride—
Antwerp, 12 cks. £53

Ammonium Sulphate—
St. Nazaire, 30 t. 1 c. £283
Honolulu, 305 11 3,000
Bordeaux, 71 11 750
Amsterdam, 40 380

Arsenic—
Otago, 1 cs. £44
Wellington, 20 dms. 26 pks, 38

Bisulphite of Lime—
Cape Town, 4 hhds. £8

Bleaching Powder—
Cape Town, 7 c. £6

Bone Ash—
Pt. Elizabeth, 2 . 10 c. £3

Boracic Acid—
Wellington, 4 cks. £33

Borax—
Rotterdam, 41 cks. £2

Carbonic Acid Gas—
Bermuda, 4 cs. £2

Caustic Soda—
Lyttelton, 7 c. £
Wellington, 16. 1

don, 11 c. 11
ruz, 4 10 35
a Bay, 1 1 24
lphia, 67 400
als *(otherwise undescribed)*
ic, 6 cs. £86
rne, 1 ck. 42 pks. (pt.) 58
nd, 10 kgs. 41
lam, { 25 / 3 cks. 153
qty. 88
9 cs. 8 pks. 186
s, 5 51
e, 10 64 (pt.) 99
own, 13 pks. 50
ille, 7 40
rg, { 15 cks. 42 / 1 35dms. 482
abeth, 12 pks. 11
's 1 ck. 34 100
P, { 5 kgs. / 100 bgs 169
lorf, 33 cks. 62
eim, 20 150
k, 4 11
lon, 6 10
Kong, 3 12
s, 5 kgs. 32
1 brl. 13
30 161
22 38
cid—
abeth, 5 c. £33
2 t. 10 315
s, 1 ck. 13
own, 7 kgs. 17
lam, 10 58
ton, 2 13
oducts—
rine
, 6 cks. £23
ne
, 1 cs. £12
ne Oil
10 dms. £260
ne Salts
15 cks. £80
racene
396 cks. £1,418
am, 310 825
ine
own, 8 dms. £9
olic Acid
rne, 4 dms. £2
s, 10 cks. 77
s, 1 cs. 5
rne, 40 17
thaline
lphia, 1,011 bgs. £128
51 29
rg, 11 cks. 105
Kong, 790 cks. £310
al, 280 58
ork, 400 186
d, 100 t. 139
o, 840 926
qty. 1,600
abeth, 20 frks. 6
rne, 8 pks. 6
d, 6 6
line
im, 13 cks. £133
line Bases
10 dms £310
o, 5 brls. £6
rsburg, 500 cks. 294
g, 170 74
Bay, 150 dms. 11
o, 50 9
6
10 8
il
rne, 15 brls. £20
ducts *(otherwise undes.)*—
s, 3 pks. £11
e, 1 ck. 19
Sulphate—
on, 10 c. £9
4 t. 18 76
, 24 7 400
of Tartar—
on, 5 c. £19
ibeth, 4 cs. 16
12 28
tants—
{ 101 pks. / 20 dms. £52
ong, 30 cks. 11
ibeth, 4 cs. 20
wn, 16 44
on, 10 10
d, 16 pks. (pt.) 23
ne, 50 pks. 38

Manure—
Lisbon, 100 t. 7 c. £390
Dunkirk, 141 705
Jersey, 103 1 322
Las Palmas, 5 50
Nitric Acid—
Townsville, 10 cs. £11
E. London, 10 24
Oxalic Acid—
Melbourne, 7 c. £11
Oxygen—
Amsterdam, 1 cs. £14
Potash—
B. Ayres, 2 t. 3 c. £36
New York, 6 27
Potassium Bichromate—
B. Ayres, 2 t. 15 c. £88
Potassium Chlorate—
Sourabaya, 10 c. £17
Wellington, 1 t. 8 45
Calcutta, 2 66
Potassium Cyanide—
Calcutta, 10 cs. £31
New York, 100 534
Launceston, 5 58
Townsville, 21 t. 16 c. 2,630
Sydney, 2 2 20 pks. 514
Shanghai, 4 18
Melbourne, 6 1 480
Pt. Elizabeth, 1 10 171
Potassium Prussiate—
Genoa, 4 t. 7 c. £236
Salt Cake—
Ghent, 147 t. £180
Bruges, 143 248
Antwerp, 135 236
Saltpetre—
Sydney, 2 t. £43
Colombo, 4 cks. 10
Antwerp, 2 t. 10 c. 47
Bahia, 4 1 86
Canterbury, 10 10
Madeira, 10 13
Sheep Dip—
San Francisco, 18 t. 19 c. £700
Sydney, 12 8 351
Cape Town, 3 5
Odessa, 200 cs. 350
Wellington, 10 cks. 70 200 dms. 315
Auckland, 6 t. 18 c 256
Gisborne, 1 2 40
Napier, 3 6
Lyttelton, 2 3 80
Christchurch, 17 20
Blenheim, 6 7
Gallegos, 18 15 500
Punta Arenas, 30 cs. 44
Soda—
B. Ayres, 1 t. 17 c. £51
Rotterdam, 5 9 30
Montreal, 1 12 8
E. London. 6 7
Sodium Bicarbonate—
Dunedin, 1 t. £8
Bombay, 6 c. 13
Sodium Carbonate—
Lisbon, 12 c. £5
Sodium Silicate—
Durban, 3 t. 4 c. £13
Vera Cruz, 2 2 7
Sulphur—
B. Ayres, 50 cs. £32
Pt. Elizabeth, 100 kgs. 44
Sulphuric Acid—
Calcutta, 1 t. 15 c. £15
Pt. Elizabeth, 1 18 18
Aden, 10 cs. 16
Tartaric Acid—
Pt. Elizabeth, 25 cks. 2 cs. £160

LIVERPOOL.

Week ending October 12th.

Alkali—
Catania, 1 t. 13 c. 3 q. £7
Venice, 15 3 3 61
Marastier, 5 3 21
Odessa, 10 1 3 40
Malta, 3 2 3 14
Leghorn, 10 2 40
Rio de Janeiro, 99 14 3 400
Seville, 15 11 65
Hiogo, 9 2 40
Boston, 1 5 18
Alum—
Rio de Janeiro, 16 c. £4
Tunis, 17 6
Melbourne, 1 t. 10 8
Adelaide, 1 2 2 q. 5
San Francisco, 20 7 87
Madras, 19 5
Callao, 5 9 1 26
Gibraltar, 2 9 2 12
Montreal, 16 10 1 73
Calcutta, 28 16 147
Sydney, 22 16 115
Galatz, 2 12 13
Trebizonde, 1 5 2 7
Aluminous Cake—
Montreal, 2 t. 4 c. 1 q. £8
Ammonia—
Constantinople, 3 c. 3 q. £6
Ammonium Carbonate—
Lisbon, 13 c. £17
Carril, 6 8
Nantes, 1 t. 1 3 q. 36
Venice, 2 2 60
Genoa, 18 1 27
Hamburg, 10 16
Antwerp, 3 2 6
Stettin, 10 14
Konigsberg, 16 1 24
Copenhagen, 2 3 2 61
Para, 2 4
Ammonium Chloride—
Smyrna, 6 c. £10
Dedlagatch 9 16
Antwerp, 1 t. 30
Odessa, 5 4 161
Havana, 2 4
San Francisco, 2 13 45
Calcutta, 2 70
Ammonium Sulphate—
Valencia, 30 t. 10 c. £295
Almeria, 100 975
Barcelona, 99 5 967
Nantes, 161 7 1,555
New York, 25 243
Venice, 10 97
Gandia, 25 243
Malaga, 31 3 1 q. 316
Las Palmas, 38 13 399
Lisbon, 20 4 1 204
Teneriffe, 2 20
Bilbao, 15 1 1 160
Bordeaux, 5 1 3 47
Basic Slag—
Nantes, 50 t. 8 c. 2 q. £76
Bleaching Powder—
Alexandria, 7 brls.
Baltimore, 30 cks.
Barcelona, 15
Boksburg, 20 dms.
Boston, 810
Calcutta, 60 cs.
Chicago, 90 brls.
Genoa, 70
Indiana, 35
Newport News, 49
New York, 44
Philadelphia, 321
Rouen, 100
San Sebastian, 15
Santander, 24
Stockholm, 12
Vera Cruz, 20
Borax—
Montreal, 16 t. 5 c. 2 q. £218
Smyrna. 1 13
Hamburg, 23 9 303
Antwerp, 6 8 2 94
Sydney, 7 15 3 132
Toronto, 12 14 184
Melbourne, 11 12
Ghent, 1 15 25
Ibrail, 5 4 1 65
Calcium Chloride—
Hong Hong, 3 t. 2 c. £7
Brisbane, 3 7
Odessa, 19 19 50
Carbolic Acid—
Hiogo, 2 t. 10 c. £160
Odessa, 5 2 q. 21
Rotterdam, 5 20
Philadelphia, 9 1 3 105
Newport News, 4 6 2 252
Larnaca, 30 cks. 20 dms. 31
Caustic Potash—
Baltimore, 12 t. 4 c. £144
Caustic Soda—
Alexandria,, 50 dms.
Algoa Bay, 4
Alicante, 20
Amsterdam, 103
Antwerp, 80
Bilbao, 30
Boksburg, 10
Bombay, 255
Boston, 100
B. Ayres, 70
Calcutta, 42
Callao, 80
Chicago, 60 30 brls. 130 bxs.
E. London, 10 cs.
Fiume, 15
Galatz, 696
Gefle, 14 161 brls.
Genoa, 170
Gutujewski, 100
Hamburg, 83
Havana, 20
Haifo, 10
Hiogo, 567
Ibrail, 55
Jewitt City, 50
Johannesburg, 60
Malta, 17
Melbourne, 85
Nantes, 60
Naples, 34
N. Orleans, 100
Odessa, 380
Oporto, 90
Pernambuco, 24
Pinedo, 30
Piræus, 6
Rangoon, 10
Riga. 10
Rotterdam, 10
Rouen, 25
St. John's, 35
Samarang, 10
San Francisco, 50
San Sebastian, 40
Santos, 50
Sao Paulo, 51
Seville, 165 170 pks.
Sourabaya, 23
Sydney, 40 6 cs.
Tarragona, 50 cks.
Trieste, 48
Trujillo, 20
Valencia, 50
Yokohama, 31
Chemicals *(otherwise undescribed)*
Rosario, 2 cks. £17
B. Ayres, 2 10
Curacao, 1 cs. 5
San Francisco, 12 t. 15 c. 26
Odessa, 11 19 1 q. 172
Calcutta, 17 13 2 120
Barcelona, 19 2 63
Philadelphia, 13 3 319
Newport News, 11 12 655
China Clay—
Bombay, 298 cks.
Georgetown, 125
Merriton, 150
Montreal,, 470
Newport News, 500
Philadelphia, 700
Citric Acid—
Sydney, 5 c. £35
Coal Products—
Aniline Oil
Genoa, 10 tins 10 dms.
Aniline Salts
Athens, 10 brls.
Boston, 24 cs.
Creosote
Bordeaux, 350 brls.
Dyes
Barcelona, 2 cs.
Calcutta, 4
Genoa, 1
Pitch
Carril, 50 brls.
Ibrail, 20
Tar
Bonthe, 20 hf-brls.
Demerara, 30 brls.
Galatz, 35 cks.
Ibrail, 20
M. Video, 10
Newport News, 28
Cobalt Oxide—
Antwerp, 2 q £50
Copper Sulphate—
Genoa, 11 t. 10 c. 2 q. £196
Ghent, 5 4 80
Galatz, 6 10 112
Bordeaux, 19 17 327
M. Video, 2 12 43
Catania, 3 4
Charlotte Town, P. E. I. 4 3 4
Hong Kong, 1 18
Disinfectants—
Sydney, 20 kgs. 3 cs. £11
New York, 5 c. 6
Rio de Janeiro, 15 23
Dried Blood—
Dunkirk, 50 t. £333
Las Palmas 5 33
Gd. Canary, 5 33
Dyestuffs—
Aniline Colours
Boston, 2 kgs. 1 cs.
New York, 23 cks. 1 brl.

Extracts
Barcelona, 2 cks.
Boston, 50
Carril, 10 bxs.
New York, 29
Logwood
Genoa, 4 cks.

Glycerine—
Sydney, 5 t. £258
Kobe, 2 120
Yokohama, 8 480
Rotterdam, 23 12 c. 2 q. 950

Guano—
Seville, 9 t. 16 c. £62

Iron Oxide—
New York, 4 c. £4

Iron Sulphate—
Rio de Janeiro, 2 t. 8 c. £5

Magnesia—
Gothenburg, 2 cks.
Naples, 10 3 cs.
Rosario, 1
Bordeaux, 12

Magnesium—
Rouen, 20 dms.

Magnesium Sulphate—
Pt. Said, 70 kgs.

Manganese Oxide—
Antwerp, 11 c. 2 q. £43

Manure—
Gd. Canary, 15 t. £68
Lisbon, 25 110
St. Vincent, 1 9 c. 12

Oxalic Acid—
Lisbon 1 t. 4 c. £35
Boston 6 19 2 q. 192

Paint—
Abonnema, 3 cks.
Alexandria, 60 kgs.
Assinee, 3
Bassam, 6
Bathurst, 7 pks.
Belize, 2
Beyrout, 10 kgs. 10 brls.
Campana, 1 crt.
Demerara, 191
Galata, 50
Gibraltar, 5 dms.
Gd. Bassa, 29 pks.
Hamburg, 16 1 dm.
Havana, 5 cks. 1
Larache, 2
M. Video, 12 cs.
Para, 96
Pernambuco, 58 bgs.
Rangoon, 4 cks.
St. John's, 236
Santiago de Cuba, 2
Sherbro, 125
Sierra Leone, 80
Vera Cruz, 6
Yokohama, 200

Painters' Colours—
B. Ayres, 10 cks.
Chiclayo, 2 9 cs.
Corral, 23
E. London, 15
Hamburg, 14
Loango, 24 kgs.
Malta. 600
M. Video, 10
Montreal, 8 4 brls.
New York, 2 2 cs. 451
Para, { 13 27 / 25 dms. 87 pks.
Pimental, 20 cs.
Piræus, 13
Pt. Natal. 5 brls.
Rangoon, 18 dms
Rio G. do. Sul, 20 kgs.
Rotterdam, 38 3 cs. 50 bgs.
St. Petersburg, 5
Salahora, 11 kgs. 3 brls.
Santander, 25
Sulina, 2
Syra, 2

Paraffin Wax—
Boston, 100 cs.
Constantinople, 70 bgs.
Pernambuco, 20
Smyrna, 40

Phosphorus—
Hiogo, 5 c. £53
Vera Cruz, 7 69

Potash Salts—
Guayaquil, 24 t. 19 c. £2,146

Potassium Bichromate—
Rio de Janeiro, 2 t. 2 q. £62
Amsterdam, 1 1 c. 36
Vera Cruz, 1 2 32
Seville, 2 2 65

Potassium Carbonate—
New York, 11 t. 2 c. £208

Potassium Chlorate—
Sydney, 7 t. £210
Libau, 12 t. 10 c. 385
New York, 16 5 488
Copenhagen, 1 10 45
Rotterdam, 5 17 187
Brisbane, 5 8
Callao, 4 6
Gutujewski, 38 15 1,135
Konigsberg. 15 20
Copenhagen, 3 95
Hamburg, 3 10 105
Gothenburg, 4 18 231
Antwerp, 8 12
Vera Cruz, 2 65

Potassium Prussiate—
Vera Cruz, 1 t. £65

Salt—
Adjuah, 6 t. 5 c.
Batanga, 7 6
Benin, 39
Bonny, 5
Boston, 500
Brass, 30
Brisbane, 35
Brussels, 100 cs.
Calcutta, 6,189
Camercons, 76 19 c.
Canso, 250
Conakry, 44 15
Danzig, 313
Delagoa Bay, 5
E. London, 193 14
Gd. Bassa, 25
Gd Bassam, 75
Gd. Lahou, 11 3
Kingston, Jam., 120
Loango, 10
Melbourne, 275 50 cs.
M. Video, 449
N. Orleans, 265
Quillo, 50
Rangoon, 824
Rio de Janeiro, 14 18 c
Rotterdam, 180
Salt Pond, 12 10
Sapeli 14
Shanghai, 1
Sinoe, 11
Sydney, 135

Salt Cake—
Antwerp, 150 t. £193
Baltimore, 25 6 c. 41
Delagoa Bay, 5 12 74
Hong Kong, 2 6

Sheep Dip—
Belize, 2 pks. £5
B. Ayres, { 100 cs. / 262 dms. 396
Calcutta, 5 cks. 25
Rangoon, 53 dms. 16
M. Video, 200 250

Soap—
Alexandria, 20 cs.
Antwerp, 420 bxs.
Banoka, 40
Bangkok, 100
Barbadoes, 359
Bathurst, 80 40 bdls.
Beyin, 100
Boma, 10
Bombay, 18 31
Boston, 3
Brisbane, 500
Brussels, 1,800
B. Ayres, 34
Calcutta, 19 250
Canaria, 208
Chama, 100
Colombo, 10
Conakry, 20
Delagoa Bay, 600 8
E. London, 9 2
Galata, 20
Gibraltar, 285 20
Gd. Bassa 50
Guayaquil, 50
Hamburg, 140
Hong Kong, 200
Honolulu, 2
Johannesburg, 15
Kingston, Jam., 870
Kobe, 215 cks.
Malta, 126
Manaos, 300
Matadi, 40
Mollendo, 20
M. Video, 21
Montreal, 350
Mossel Bay, 265
M'Pongwe, 30
New York, 43
Noqui, 250
Old Calabar, 610
Para, 400
Penang, 137 400
Pt. Elizabeth, 300
Pt. Natal, 748
Piræus, 1
Principulca, 40
Progresso, 1
Quittah, 50
Rangoon, 250 3
San Antonio, 20
St. John's, 141
St. Thomas, 350
Samarang, 2
Shanghai, 201
Sherbro, 2
Sierra Leone, 70
Singapore, 410 31
Stockholm, 300
Surinam, 420
Sydney, 6,000
Teneriffe, 110
Tientsin, 108
Valparaiso, 12
Victoria. W.C.A., 200

Soda Ash—
Adelaide, 101 cks
Algoa Bay, 24
Barcelona, 20
Boston, 35
Calcutta, 100 kgs.
Callao, 113
Christiania, 20 bgs. 26
Demerara, 8
Genoa, 200 93
Hamburg, 71
Kingston, Jam., 12
Melbourne, 12
Montreal { 25 kgs. / 420 bgs.
New York, 160 66 tcs
Oporto, 10
Patras, 20 brls.
Philadelphia, 33 tcs. 37
Pt Adelaide, 114
Portland, Or., 116
Pt. Natal, 40 kgs.
Rio de Janeiro, 200 brls.
Samarang, 64
San Francisco, 146
Sourabaya, 3
Stockholm, 101 bgs.
Syra. 100 64
Venice, 50 175
Vera Cruz, 25
Yokohama, 42

Soda Crystals—
Boston, 56 brls.
Kobe, 199 pks.
Malta, 185
New York, 112
Oporto, 20
Penang, 10
St. John's, 40
Smyrna, 50

Sodium Bicarbonate—
Amsterdam, 200 kgs.
Batavia, 10
Bombay, 233 16 cks.
Bordeaux, 30 65 pks
Calcutta, 500
Cienfuegos, 12
Christiania, 20
Colombo, 34
Constantinople, 1 cs. 1 ck.
Delagoa Bay, 10 bgs.
Ghent, 4
Gutujewski, 550 kgs.
Hamburg, 145
Johannesburg, 24
Libau, 100
Malta, 10
Melbourne, 134
Odessa, 240 2
Riga, 576
Rosario, 18
Rotterdam, 25
Rouen, 330 65 pks.
St. John's, 20
St. Petersburg, 500
Santander, 60 bgs.
Singapore, 10 kgs.
Trieste, 50
Yokohama, 100

Sodium Bichromate—
Hamburg, 6 cks.
M. Video, 2
Montreal, 10

Sodium Chlorate—
Gothenburg, 20 kgs.
Hamburg, 21 cks. 2 brls.

Sodium Hyposulphite—
Portland, Or, 240 kgs.

Sodium Naphthionate—
Barcelona, 18 cks.

Sodium Nitrate—
Palermo, 26 bgs.
New York, 10 c.

Sodium Sulphate—
Montreal, 42 cks.
Rio de Janeiro, 3 cs.

Starch—
Nantes, 1 hd.

Strontia—
Hamburg, 118 t. 13 c. £1
Rotterdam, 2 1

Sulphur—
Calcutta, 4 t. 10 c.
Natal, 14 12

Superphosphates—
Barcelona, 200 t.
Castellon, 193
Gd. Canary, 1
Malaga, 100
Nantes, 236 4 c.
Valencia, 150 3 3 q.

Varnish—
Barcelona, 7 cks. 2 brls. 2 dm
Demerara, 10
New York, 4
Rotterdam, 2
Terrenofe, 1 cs.
Valparaiso, 20

White Lead—
Montreal, 2 cks.
Syra. 10

Zinc Chloride—
New York, 9 t. 10 c.

MANCHESTE

Week ending October 12t

Alum—
Susa, 10 brls.

Anido Salts—
Switzerland, 12 cks.

Aniline—
Belgium 1 d

Caustic Soda—
Beyrout, 25 da
Lattakia, 10
Tunis, 10

Chemicals (*otherwise undescri*
Antwerp, 24 kgs. 6 cs.
Rotterdam, { 16 / 2 cks.

Coal Products—
Naphthol
Holland. 9 cks.
Naphthylamine
Switzerland, 31 cks.
Pitch
Belgium, 302 t. 4 c.
Tar Oil
Belgium, 10 brls.
Tar Salts
Alexandrowo, 51 bgs.

Colours—
Belgium, 5 cks.

Glue—
Holland, 19 cks.

Glycerine—
Belgium, 4 dm
Germany, 5 crbys.

Logwood—
Alexandria, 134 bgs.

Paint—
Alexandria, 63 kgs.
Jaffa, 1 ck.

Painters' Colours—
Bombay, 2 cks.
Larnaca, 3

Paraffin Wax—
Hamburg, 3 cs.

Potassium Bichromate—
Alexandretta, 20 kgs.

Prussian Blue—
Holland, 1 kg.

Salt—
Ghent, 150 t.

Soap—
Holland, 26 cs.
Malta, 10 bxs. 1

Soda Ash—
Lattakia, 50 brls.
Tripoli, S., 100 cks

Sodium Bicarbonate—
Alexandretta, 10 kgs.
Jaffa, 6

Soda Crystals—
Jaffa, 15 brls.

Sodium Silicate—
Sfax, 20 brls.

ntine—
1 brl.

HULL.

tek ending October 8th.

—
47 cks.
iania, 34
heim, 100 bgs.
50 cks.
580 bgs.
49 cks.
19
rg, 38
—
5 cks.
org, 20
rg, 4
nium Sulphate—
aux, 99 bgs.
urg, 200
Slag—
1,524 bgs.
hing Powder—
g, 33 cks.
ork, 192
c Soda—
g, 35 dms.
231
cals (*otherwise undescribed*)
1 ck.
rdam, 24
?, 3 pks.
iania, 15 kgs.
hagen, 12 cks. 8 cs.
g, 7 1
54 kgs.
nburg, 10 12
urg, 89
gfors, 2 cks.
sberg, 13
23
150 3 dms.
dam, 11 102
11 pks.
seed Oil—
rdam, 185 c.
n, 20
iania, 10
iansand, 3
hagen, 402
206
urg, 195
gen, 23
sberg, 117
dam, 908
248
99
olm, 7
te—
rp, 10 cks.
g, 10 brls.
dam, 50
iffs (*otherwise undes.*)—
iania, 2 cks.
dam, 1 cs.
—
iania, 20 sks.
rdam, 10 bgs.
burg, 20
ork, 18 cks.
—
rk, 2,034 bgs.
d Oil—
rdam, 100 c.
rp, 20
iania, 268
iansand, 20
hagen, 155
heim, 63
7
urg, 17
ger, 104
ies—
40 brls.
—
iansand, 24 kgs.
1 ck.
rs' Colours—
rdam, 26 cks. 12 pks.
18 dms.
rp, 57 2 cs. 156 pks.
n, 3
iania, 1
ansand, 24
1
hagen, 63 1 16 dms.

Danzig, 1
Drontheim, 15 2
Gothenburg, 4 pks.
Ghent, 2 25 dms.
Hamburg, 25 2
Helsingfors, 77 1
Konigsberg, 70
New York, 179 51 kgs.
Rotterdam, 13 28
Riga, 4 pks.
St. Petersburg, 1
Stavanger, 1
Stettin, 9 15
Stockholm, 2
Pitch—
Helsingfors, 87 cks.
Sheep Dip—
Hamburg, 10 cs.
Soap—
Christiania, 50 cs.
Copenhagen, 1 ck.
Rotterdam, 20
Superphosphates—
Kastrup, 287 t. 6 c.
Tallow—
Amsterdam, 15 cks.
Hamburg, 38
Rotterdam, 29
Stockholm, 10
Wasa, 56
Tar—
Amsterdam, 17 brls.
Antwerp, 14 cks.
Christiania, 16
Copenhagen, 28
Hamburg, 10
Heisingfors, 100
Wasa, 100
Varnish—
Abo, 1 cs.
Amsterdam, 2 cks.
Antwerp, 11 1
Danzig, 1 2
Gothenburg, 1
Hamburg, 3 2
Stettin, 9
Stockholm, 5

GLASGOW.

Week ending October 13th.

Alkali—
Nickerie, 6 c.
Alum—
B. Ayres, £24
Ammonium Carbonate—
Montreal, £32
Ammonium Chloride—
Bilbao, 19 c.
Ammonium Sulphate—
Mauritius, 611 t. 18¼ c.
Nickerie, 41
Borax—
Rotterdam, £35 17s
Carbolic Acid—
Christiania, £6
Caustic Soda—
B. Ayres, 30 t. 8 c.
Mauritius, 3 ¾
Chemicals (*otherwise undescribed*)
Rotterdam, £49
Coal Products—
Creosote
New York, £29
Creosote Oil
France, £1,915
Pitch
Ancona, £1,728
Canada, 108
Havre, 550 t.
Nickerie, 11 c.
Riga, 9
Sulina, 1,000
U.S.A., 40
Tar
Canada, £45
Nickerie, 1 t. 6 c.
Riga, 330
Tar and Pitch
Calcutta, £210
Rangoon, 98
Dextrine—
U.S.A., £201
Gelatine—
U.S.A., £195
Glue—
Nickerie, 1 c.
Rangoon, £81

Guano—
Malaga, 100 t. 1 c.
Hydrochloric Acid—
Bombay, £64
Lead Acetate—
Bombay, £51
Magnesium Sulphate—
Montreal, £51 10s.
Paint—
Colombo, £26
Nickerie, 1 t.
Riga, 10 c
Painters' Colours—
Cape Colony, £65
Paraffin Wax—
Bilbao, £45
Gijon, 32
Rotterdam, 10
Skien, 30
Potassium Bichromate—
Antwerp, £147
Bombay, 153
Montreal, 319
Rotterdam, 128
U.S.A., 404
Salt—
Mauritius, £380
Soap—
Bombay, 2 t. 11¼ c.
Nickerie, 2
Rangoon, 1 13
Sodium Bichromate—
Montreal, 3 t. 2¾ c.
U.S.A., 4 13¾
Starch—
Alexandria, £20
Rotterdam, 43
Sulphuric Acid—
Nickerie, 1 t. 12 c.
Rangoon, £100 14s.
Tallow—
Mauritius, 1 t. 3 c.
Rotterdam, 5 2¼
Turpentine—
Nickerie, 10 gls.

TYNE.

Week ending October 8th.

Alkali—
Amsterdam, 28 t. 6 c.
Bergen, 3
Rotterdam, 4 19
St. Petersburg, 8 13
Ammonia—
Barcelona, 1 c.
Bergen, 4
Ammonium Carbonate—
Hamburg, 19 c.
Antimony—
Hamburg. 5 t.
St. Petersburg, 20
Arsenic—
Hamburg, 10 c.
Barium Binoxide—
Genoa, 12 t. 17 c.
Hamburg, 3 13
Bleaching Powder—
Amsterdam, 5 t. 3 c.
Copenhagen 9 12
Drontheim, 10 1
Ghent, 25 5
Hamburg, 17 2
Helsingfors, 85
Rotterdam. 27 16
St. Petersburg, 58 2
Bone Grease—
Genoa, 18 t. 16 c.
Caustic Soda—
Abo, 3 t. 4 c.
Barcelona, 100 14
Christiania, 7 5
Genoa, 41 9
Helsingfors, 70 16
Rotterdam, 3 12
Ruamo, 10
Wyborg, 7
Litharge—
Helsingfors, 6 t. 14 c.
Magnesia—
Antwerp, 3 c.
Barcelona, 14 t. 3
Hamburg, 1 1
St. Petersburg, 4 10
Paint—
Abo, 2 c.
Copenhagen, 17
Hamburg, 2
Helsingfors, 2

Pitch—
Antwerp. 25 blocks
Pitch Oil—
Antwerp, 2 dms.
Slag—
Rotterdam, 149 t.
Soap—
Christiania, 2 q.
Pt. Nolloth, 14 c.
Soda—
Abo, 2 t. 11 c.
Amsterdam, 20
Hamburg, 97 10
Helsingfors, 17
Rotterdam, 15 3
Wyburg, 9 3
Soda Ash—
Abo, 120 t. 10 c.
Bergen, 10
Hamburg. 20 6
Helsingfors, 58 12
Wyburg, 20 4
Sodium Silicate—
Genoa, 8 t. 3 c.
Sodium Sulphate—
Antwerp, 382 t. 3 c.
Christiania, 100
Copenhagen, 20 10
Helsingfors, 482 7
St. Petersburg, 20 4
Starch—
Copenhagen, 1 c.
Sulphur—
Abo, 3 c.
Superphosphate—
Aalborg, 102 t. 1 c.
Tallow—
Abo, 1 t. 1 c.
Genoa. 11 18
Helsingfors, 15 11
Tar—
Reval, 10 brls.
Tar Oil—
Hamburg, 4 dms.
White Lead—
Copenhagen, 2 t. 13 c.
Helsingfors, 14

GOOLE.

Week ending October 5th.

Alkali—
Antwerp, 18 cks.
Caoutchouc—
Ghent, 9 cs.
Chemicals (*otherwise undescribed*)
Amsterdam, 20 cks.
Coal Products (*otherwise undes.*)—
Amsterdam, 79 cks.
Antwerp, 3
Boulogne, 59 3 cs.
Hamburg, 25
Rotterdam, 1
Dyestuffs (*otherwise undescribed*)
Amsterdam, 2 cks.
Manure—
Dunkirk, 493 bgs.
Painters' Colours—
Amsterdam, 200 bgs.
Boulogne, 4 cks. 2 cs. 1 tin 1 pk.
Rotterdam, 9
Pitch—
Antwerp, 496 t.

GRIMSBY.

Week ending October 8th.

Alkali—
Hamburg, 26 cs.
Chemicals (*otherwise undescribed*)
Antwerp, 13 pks.
Dieppe, 3 cs.
Malmo, 1
Caoutchouc—
Gothenburg, 1 ble.
Malmo, 1
Coal Products (*otherwise undes.*)—
Dieppe, 28 cks. 3 cs.
Hamburg, 2
Manure—
Esbjerg, 4,660 bgs.
Painters' Colours—
Antwerp, 7 cks. 3 pks.
Dieppe, 2
Hamburg, 9

PRICES CURRENT. WEDNESDAY, Oct. 19, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	9	10	0
,, ,, (grey) Hull .. .. ,,	9	10	0
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	35	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. .. nett ,,	4	17	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	17	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 25/-		
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8½
,, 50/90 ,, ... ,,	0	0	8½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. ,,	1	5	0
Solvent Naphtha, 90% at 160° .. .. .. per gallon	0	1	1½
Copper .. .. per ton	53	3	9
,, Sulphate .. .. ,,	17	5	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80% .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	17	0	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	5	0
,, ,, (grey) (ex ship) .. .. ,,	7	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° o.p .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° o.p. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	15	15	0
Linseed .. .. ,,	18	10	0
Stearine .. .. ,,	25	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	5	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	15	0
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	7	6
,, Acetate (ex-ship) .. .. ,,	11	15	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	13	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	17	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	12	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	4⅞
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	0
,, ,, (Glauber's Salts .. .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5⅜
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	7	6
,, (Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	23	5	0
Tin Crystals .. .. per lb.	0	0	5⅜
,, English Ingots .. .. per ton	84	15	0
Zinc (Spelter) .. .. ,,	23	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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AND

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reports, and correspondence on all matters of interest to al and allied industries, home and foreign, are solicited. ents should condense their matter as much as possible, e side only of the paper, and in all cases give their names ses, not necessarily for publication. Sketches should be arate sheets.

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ments intended for insertion in the current week's issue the office by **Thursday morning** at the latest.

CURRENT TOPICS.

ENGLISH ENTERPRISE IN GERMANY.

FOR a long time our Consuls and educational enthusiasts have been drumming into us as a nation our backwardness and inefficiency in commercial matters, as compared with the industrial aggressiveness of our Teutonic neighbours. In addition to this there have been many exponents of the evils resulting from the spread of labour disputes, and their deterrent effects upon industrial progress. Apart from the complaints of the educational reformer, which are not without foundation, the chief excuse for our apparent decline has been cheapness of labour on the Continent and the absence of strikes and lock-outs. In consequence it has not unfrequently been suggested, in a more or less facetious spirit, that if the industrial conditions in Germany and Belgium are so Utopian why do not our capitalists beard the lion in its own den and escape from poor ignorance-stricken strike-laden England by transferring their works to these countries.

It is hardly with feelings of surprise, therefore, we learn this week that the tables have been turned, by English manufacturers making preparations to open works in Germany.

It has been a matter of common knowledge for some time that several important English industrial concerns have been taking steps to open branch establishments in south Germany, but this week it has definitely transpired that the firm of Messrs. Lever Brothers, of Port Sunlight, have bought 85,000 square metres at Rheinauhafen, in the vicinity of Mannheim, where a soap factory is to be erected. For this purpose a group of German capitalists will co-operate in the formation of a German limited company with head offices in Mannheim.

Furthermore, an English chemical manufacturing concern and a Coventry motor building company are in the midst of active negotiations with land owners with a view to purchasing sites for new works. Can this be the turn of the pendulum? It has certainly swung one way a long time.

NITRATE WORKERS' STRIKE IN CHILI.

It is only consistent with the climate of Chili that it never rains but it pours; but still the country often belies its name if not its climate, for just at present both political and industrial affairs are decidedly " warm " in Chili. It sounds paradoxical, but it is a state of things characteristic of this country. The fact of the Cabinet having resigned leaves room for regrets or congratulations according to individual opinions; but there can be no doubt about the strike of the railway and nitrate *oficina* employés.

Nitrate prospects are none too rosy just now, and this strike will not tend to improve matters, while it will seriously affect the finances of the railway companies, which have mostly been progressing nicely of late. The stoppage of nitrate production concurrently with the congestion of traffic

on the railways will not impose any serious difficulties on the nitrate producers for the moment; but unless the differences between the respective employers and employés are adjusted simultaneously, there is considerable likelihood of unpleasant complications arising and overcasting the horizon of the nitrate world.

Agricultural Notes.

THE PURCHASE OF FERTILISERS.

Some interesting returns have recently been issued concerning the assistance afforded by Irish farmers' societies in the purchase of fertilisers. It appears that in consequence of the action of the societies traders have been induced to bring their goods down to a fair price, to the advantage of the whole community. The secretary of the Caltra Society says that manures have been procured for its members at 50 per cent. lower than local shop prices. The secretary of Shanagarry Society, which last year sold 200 tons and bought £200. worth of seeds, says:—"The manures are now bought at from 30s. per ton less than formerly, and seeds of much better quality at 15 per cent. less." The secretary of the Monivea Society says that this year the members were supplied with 276 tons of manure at 30s. per ton less than they could have procured it individually, and 50s. less than they actually paid for it last year; and yet this society had only been in existence six months when the report was written. The members of the Ballimacward Society have effected a saving of 45 per cent. The Society of Ardrahan has purchased manures and seeds from the wholesale branch to the extent of £1,000., and has effected a saving of at least 25 per cent. The secretary of the Kiltartan Society says that the local dealers charged £5. a ton for superphosphate which has been obtained at £3. 4s. 6d. from the wholesale society, and £11. 10s. for guano, which has been purchased for £6. 12s. In the counties of Kilkenny and Tipperary superphosphates of 35 to 37 per cent. cost £5. 5s., and those of 25 to 27 per cent. £5. before the co-operative societies were formed; these prices have now been reduced to £2. 13s. 9d. and £2. 2s These figures are simple, clear and startling. The fact is that farmers in Ireland, like many in this country, have been entirely at sea as to the composition and intrinsic value of chemical manures. Believing this knowledge was beyond them, they have paid no regard to it, and have accepted whatever price dealers have chosen to ask as representing value. Now, however, that these particulars are being popularised in the press from week to week and explained in such simple language that anyone who cares to try can understand, matters are becoming different. The London price of superphosphate can always be ascertained by reference to the agricultural press. Formerly it was explained that a low-priced superphosphate was charged at a low figure simply because it was inferior. Now, however, farmers have been taught to demand details as to quality, and they understand that a manure containing 27 per cent. of soluble phosphate in Ireland is equal to similar manure containing 27 per cent in England. On behalf of the traders it may be remarked that where they sell different lots of 1 cwt. or 2 cwt., and have only a limited sale, they cannot possibly sell at the market price, largely on account of the heavy cost of conveyance; but by means of co-operation large quantities are purchased in bulk, and can be practically delivered at market price.

With regard to

MIXED MANURES,

such as those described as potato manures, there is still some information which it is desirable that less educated farmers should obtain. A distinct manure like superphosphate or slag, nitrate of soda or sulphate of ammonia, has a systematic market price which can be obtained from week to week. These manures contain materials which find their way into mixed or composite manures, which ought, therefore, to be a guide to the intrinsic value of the latter. For example, in preparing a manure for potatoes many persons would combine equal weights of phosphatic, potassic, and nitrogenous fertilisers. A farmer determined to manure liberally for the potato crop might safely employ 1cwt. each per acre of kainit, superphosphate, and nitrate of soda. These manures he might mix just before use, and distribute in the furrows drawn by the potato plough. In this case he would know exactly what his manures had cost, and consequently what a mixed manure was worth. But supposing a dealer prepares a mixture with the same materials and sells it as a potato manure, he may charge 50 per cent. more than the market price of the three fertilizers employed, because he is aware that the buyer cannot tell of what it is composed. If the kainit cost 2s. 6d. per cwt. by the ton, superphosphate 2s. 6d., and nitrate of soda 7s.6d., the 3cwt. employed per acre would cost 12s. 6d., or, in other words, the mixed manure would cost slightly more than £4. a ton. Such a manure is constantly sold at £6. 10s. per ton, or more, whereas its market value is exactly what has been stated, assuming these prices represent the price of the week, plus the cost of mixing and the dealer's profit. There is, however, another aspect from which we may look at this matter. Supposing the farmer buys a ton of potato manure—and the principle applies to any other mixed fertiliser—and he is shown that it contains 5 per cent. of nitrogen, 8 per cent. of soluble phosphate, and 5 per cent. of potash. He can calculate its market value from the market prices of the three fertilisers which have been already mentioned. At £7. 10s. a ton nitrate of soda containing 15 per cent. of nitrogen is worth 10s a unit; consequently a manure containing 5 per cent is worth 50s., taking each 1 per cent. as a unit. Similarly, superphosphate costing 48s. a ton of 24 per cent. is worth 2s. a unit. This would add 16s. to the 50s. Potassic manure, also costing 48s. and containing 16 per cent. of potash, would be worth 3s. a unit. So that the manure containing 5 per cent. would add 15s. to the sums already mentioned, making 81s as the value of the mixed manure. In practice, manures of this quality are not uncommon, but the example is given in order to show how a farmer with the figures before him—and he should never attempt to buy unless they are supplied—can estimate the market value of what he purchases. If for any reason he finds upon analysis that the quality is not in accordance with the figures which have been handed him, he has his remedy at once, and can obtain compensation from the seller with the least possible trouble. Apart from this, farmers should combine in order to obtain for themselves some of the many other advantages which have been and are still being realised by the farmers in Ireland with the assistance of the Organisation Society.

Petroleum Ship Burnt.—The Italian ship, *Tomaso Padre*, which had arrived at Cette with a full cargo of petroleum, blew up with a terrific report in the docks on Sunday night. The fire extended to the masts and rigging of the French sailing ship *Louise*, moored alongside. The danger was great, as this vessel also had nine hundred casks of petroleum on board. The Italian ship was eventually cut from her moorings and towed into the outer harbour, where she sank. The greatest excitement prevailed. The fire on the *Louise* was prevented from spreading beyond the rigging and masts.

The Alleged Pollution of the Mersey.—At the last meeting of the Manchester City Council, Ald. Sir Bosdin Leech, chairman of the Rivers Committee, in moving the adoption of the proceedings of that committee, took occasion to call attention to the complaints which had been made in Liverpool that the Manchester sludge steamers were polluting the estuary of the Mersey. Before doing so he informed the Council that the Local Government Board had granted the committee almost the whole of what they required in respect of borrowing powers. That was very satisfactory. He desired to say that there was no valid ground for the complaints that had been made in respect to the manner of dealing with the Manchester sludge. He regretted that certain articles had been written and statements made on this subject. He thought too much of their Liverpool friends to believe that they supposed they had a monopoly of the Mersey. From all time the drainage and sewage of the Mersey and Irwell watershed had been poured into the sea, and it should be recognised that of late years great efforts had been made by the local authorities whose districts drained into the two rivers to remove the noxious matter from the sewage. So far as taking their sludge out to sea was concerned, he believed they were doing what was right and proper.

Ice Cream and Typhoid.—The Batley sanitary authorities are just now busily engaged in dealing with a rather serious outbreak of typhoid fever in the borough, which there is every reason to believe has originated through the eating of ice cream obtained from certain itinerant vendors in the Batley Feast Ground in the middle of September. At that time—September 17th—there was only one case of typhoid in Batley, and now about fifty patients are undergoing treatment, this number of notifications having been made to the Sanitary Department within the past three weeks or a month. From inquiries made by the Medical Officer and the Sanitary Inspector it seems that the most serious cases are those where the sufferers obtained their ice cream from stalls situate near to the steam roundabouts in the Feast Ground, though suspicion attaches to others who had the privilege of selling during the three days which the feast lasted. Out of the full number of about fifty cases, there seems to be only two adult patients, the remainder being from seven to seventeen years of age. In some instances two or three members of the same family are affected. The present outbreak is fortunately characterised by a mildness which gives hope to the belief that the number of deaths will be small, though two or three of the worst cases, where the patient was not sufficiently strong in constitution to successfully battle with the disease, have ended fatally. No information is forthcoming as to the nature or exact quality of the ice cream disposed of in the Feast Ground, but from inquiries it appears that a considerable quantity was sold, not only to children, but to youths, and even adults.

The Patent List.

ist is compiled from Official sources in the Manchester Laboratory, under the immediate supervision of . Davis and Alfred R. Davis, who report professionally value of Chemical Patents.

ICATIONS FOR ENGLISH LETTERS PATENT.

position of Metals. S. O. Cowper-Coles. 21,248. October 10.
Salt. H. Y. Castner. 21,284. October 10.
ftening Apparatus. W. J. Wright. 21,289. October 10.
or Treating Manganate of Soda with Air, etc. F. B. Felt. October 10.
Dry Colours. W. G. Williams and S. Taylor. 21,326. October 11.
olutions. H. Blumenberg. 21,364. October 11.
g Precious Metals from Ores. J. B. de Alzugaray. 21,395. r 11.
and Disinfectant Compound. W. P. Thompson. 21,408. r 11.
sh Offal, etc. H. Winckler, etc. 21,499. October 12.
fying Apparatus. C. Heap and T. Oddy. 21,537. October 13.
g Precious Metals. The Coombes Dry Mining Syndicate, Limited, A. Coombes. 21,552. October 13.
ure of Sulphuric Acid. A. Sébillot. 21,616. October 14.
Oxalic Acid and Oxalates. T. Macalpine. 21,653. October 14.
ure of Salt. T. C. Lowden. 21,657. October 14.
ients in Coke Ovens. E. Festner and G. Hoffmann. 21,678. r 14.
Coke and Recovering Bye-products. Count A. D. de Micheroux. October 15.
ating Composition for Wood Work. R. Pearson. 21,763. r 15.
Water. S. Pitt. 21,769. October 15.

RACTS OF LATEST COMPLETE SPECIFICATIONS.

bstracts are specially prepared for the Chemical Trade Journal, RIGHTS *of publication are* RESERVED. *This is the earliest bstracts of Chemical and allied patents accessible to the public.*

ients in or Relating to the Maintenance and Regulation of in Distillation, Refining, Chemical Manufacturing Processes, ne like. H. Higgins, 4, Trinity-street, Cambridge. Eng. Pat. 23,054. r 7, 1897.

such as toluene, having a boiling point above that of water, l, and the vapour made the medium for conveying the heat The vapour may be superheated if necessary, a fluid which lf to such treatment being chosen by preference. The retort ted is enclosed in an air-jacketted chamber and surrounded our, or the contents of the chamber may be heated by a coil which the superheated vapour circulates. The liquid resulting condensation of the superheated vapour in the air-jacketted hamber is returned to the tank which feeds the vaporiser and er. There are two figures showing possible arrangements of . Patents 7,663/97 and 22,019/97 have reference to other orms of plant suggested by the patentee.

nents in Apparatus for Pulverising and Purifying Salt and Substances. A. MacNab, 23, Great Winchester-street, London, E.C. Pat. 23,473. October 12, 1897.

lt, suspended in brine, is fed into a grinder resembling a corn- formed by revolving in a horizontal plane a disc, the bevelled which engages with a shoulder on the casing of the grinder. is thus pulverised, and flows with the brine to a vertical in which, by revolving beaters and baffle plates, the salt is ly washed. The salt can then be obtained by settling, but by should be passed into a vertical separating column in which blades tend to throw the brine upwards to an overflow pipe, off the impurities; while the purified salt sinks to the bottom, be removed as required. There are three figures.

ments in the Process for the Manufacture of Carbide of Calcium Apparatus therefor. G. Bower, St. Neots, Hunts. (communicated by Hewes, 421, Chestnut-street, Philadelphia, Pa., U.S.A.). Eng. Pat. January 25, 1898.

me and carbon are mixed with a binder, such as sugar, asphal- lasses, pitch, etc. (preference being given to bodies which on re converted into carbon), and then pressed into pastilles or es. These are then subjected to the electric arc in a crucible- urnace, the bottom of which forms one electrode, while an e electrode is also introduced through the top of the furnace. l advantage claimed is the facility with which the gases evolved pe between the pastilles, which in turn, owing to their having mpressed, are better conductors. There is one figure.

Improved Diaphragm for Electrolytic Apparatus. W. P. Thompson, 322, High Holborn, E.C., etc. (communicated by E. Langguth, 62, Templergraben, Aachen, Germany). Eng. Pat. 15,430. July 13, 1898.

The diaphragm is a mercuric one. Taking a network of iron, nickel, cobalt, or copper as a basis, the meshes are filled in with an amalgam of copper, lead, or silver, which is applied as a warm paste, and must contain an excess of mercury. When cold, the whole forms a solid gas-tight plate, which is used to separate the anode and cathode compartments of an electrolytic cell, and acts as a bi-polar electrode. As a diaphragm it is claimed to be unacted upon by the electrolyte, and of low resistance. In use the anode compartment is filled with potassium chloride solution, and the cathode side with dilute caustic potash. On the passage of the current chlorine is given off, while the potassium amalgamates with the free mercury in the diaphragm. But the HO ion which reaches the bi-polar diaphragm from the cathode side decomposes the amalgam, forming caustic potash, and leaving the mercury free again. The caustic lye thus becomes concentrated as long as fresh supplies of chloride are added on the anode side. There are two figures.

Improvements in or Connected with the Manufacture of Slag Wool. W. P. Ingram, Post Office Buildings, Middlesbrough. Eng. Pat. 25,468. November 3, 1897.

This patent is practically identical with No. 23,670/97 (*C. T. J.* 595, p. 243), only that the annealing furnace is replaced by a non-conducting hood placed over the ladle as it stands upon the bogey, forming a kind of portable furnace, which can then be run to as many atomising jets as there are ladles. Four figures accompany the specification.

CYANIDE MANUFACTURE IN GERMANY.—The Stassfurt Chemische Fabrik has recently increased the number of its furnaces from 36 to 52, thus enabling them to make their output of cyanide 150 tons per month. The factory is said to be the largest cyanide one on the Continent.

NEW BORAX PLANT PROJECTED.—The California Borax Co. has been incorporated under the laws of California to purchase and secure the ownership of certain tracts of land in San Bernardino, Kern, and Inyo counties, owned by A. V. Davidson, J. W. Murphy, C. W. Craig, H. P. Carter, and F. E. Densmore, and to improve the same; also to deal in minerals, &c. The principal place of business will be in San Francisco, and the capital stock is $200,000., of which there is $171,428·57 already subscribed by F. W. Densmore and the following directors: A. V. Davidson, I. J. Woodin, and W. J. Murphy, of Independence, Inyo county, and G. H. Bradford, Henry H. Scott, and Stephen L. Harris, of San Francisco.

THE RESIN MARKET.—The market has assumed a very strong position for all grades. Notwithstanding a decrease of about 19,000 barrels in the exports from Savannah, the stock there is said to be 65,000 barrels less than last year. This, it is inferred, implies a considerable increase of consumption in the United States. The position of the lower is not so good as that of the higher grades, owing to better supplies being held in Europe; but even these qualities have advanced at a time of the year when receipts are usually at the heaviest and prices at the lowest. The London market has become more active during the past month, and all prices are higher. In Liverpool the prices of common qualities are unchanged, with all other grades firmer.

FIRE TESTS WITH UNPROTECTED COLUMNS.—The British Fire Protection Committee has sent us a pamphlet in which are given the methods and results of testing both iron and steel columns under varying conditions as to load and temperature. It is illustrated with twelve fine plates from photographs of the furnace employed and the columns after testing. There are also several diagrams giving detailed measurements of the columns. For our own part we wish that the conductors of these experiments had included in their report the conclusions they had arrived at from these tests. It would appear from the particulars given that on the whole the cast-iron columns withstood a more severe test than the steel ones. This conclusion is quite inimical to that drawn by Professor Burr, who, in the "School of Mines Quarterly," condemns very strongly the use of cast-iron columns in building construction.

DEATHS FROM FIRE IN LONDON.—In a report dated October 20 the Fire Brigade Committee of the London County Council state that during the past quarter inquests had been held into the cause of death of 18 persons whose deaths resulted from fires in London, that a verdict of accidental death was returned in each case, and that in eight cases, in which two men, five women, and a child lost their lives, the cause was stated to be either by the upsetting of a mineral oil lamp or stove or the explosion of a mineral oil stove. This week a serious fire was caused by the explosion of a mineral oil lamp at 98, Bemerton-street, Caledonian-road, London, N., in a tenement occupied by a lodger named Chapman. At the time there were four people in the room, and three of these were badly burnt and removed to a hospital.

Reports of Companies.

THE WHITE LEAD CO., LTD.

The directors of the White Lead Company, Limited, in their report for the year ended December 31 last, state that there was a scarcity of ore during the first three months of 1897, which caused much reduction of sales, to which reduction the engineers' strike also contributed. In consequence of competition, especially with German carbonate, which supplies so much of the white lead trade of this country, prices were kept down. For the above reasons there was a slight decrease of the total of sales for 1897 below that for 1896, and though expenses were reduced to a minimum, the profit and loss account, with no improvement on the same account for the previous year, shows a heavy loss also on the trading of 1897. To enable the business to be carried on, Sir Henry Tyler, who, at the request of the shareholders, undertook the chairmanship of the company in December, 1890, on the resignation of Sir Gerald Graham, has continued to supply the necessary funds. The total indebtedness of the company to him amounted, on December 31, 1897, to £50,832., and on September 30, 1898, to £53,137. These amounts, on account of cash advances, rent and interest, are in addition to an overdraft at the bank, which stood at £5,224. on the latter date, and for which he is personally responsible. The shareholders were informed in the report of the directors last year, and in the address of the chairman at the last ordinary general meeting, that the question of continuing the business as a commercial undertaking would depend on the results to be obtained during the closing months of 1897 and the earlier part of the present year. Further steps were accordingly taken to bring specially and prominently before Government and railway authorities, as well as public companies, firms, and institutions, the advantages to be derived from the use of the company's innocuous white (sulphate of) lead in place of the poisonous white (carbonate of) lead. And one of the shareholders very kindly and energetically exerted himself to assist the directors in this matter. The opportunity was favourable, at a time when public attention was almost daily directed to cases of disease and death from lead poisoning, and a letter was addressed to the newspapers on the subject; but the result of these efforts served only further to demonstrate the difficulty of overcoming

PREJUDICE AND IGNORANCE,

and of diverting the course of a long-established trade; whilst negotiations with important firms and large dealers, who were good enough to interest themselves in the matter, confirmed the experience previously obtained, that the further extension of the business was simply a question of price. It appeared that little or no importance was attached by any class of purchasers to innocuous properties, and that unless the company's products could be offered at prices incompatible with profit there was no immediate prospect of sufficiently increasing the business to make it worth while at present to continue the manufacture. At the same time, the quality of the sulphate of lead now produced is so uniformly good, and it has been so freely sold to and so much appreciated by those who have acquired the habit of using it, that there will probably be a large field for it in future years, when its value has become better known and is more extensively acknowledged. Meanwhile the board, after somewhat delaying the general meeting, to judge of the result of the special efforts above referred to, and after carefully considering the whole position, have reluctantly arrived at the conclusion, in which the shareholders will doubtless agree with them, that it would be unwise to carry on the business any longer, and that it would be unreasonable to expect Sir Henry Tyler under such circumstances to continue the advances of the large sums of money necessary to do so.

VOLUNTARY LIQUIDATION.

They therefore have determined to submit a resolution at an extraordinary general meeting to be held at the close of the forthcoming ordinary general meeting, with a view to the voluntary liquidation of the company. In carrying out this process, stocks will be realised, all debts will be paid, and Sir Henry Tyler will remain the only creditor. [*Vide* Correspondence columns p. 275.—Ed. *C.T.J.*]

WELSBACH INCANDESCENT GAS LIGHT CO., LTD.

The directors of the Welsbach Incandescent Gas Light Co., Ltd., in forwarding to the shareholders the report and accounts of the original Austrian Incandescent Gas Light Company of Vienna for the year ended June 30 last, state that it will be remembered that the Welsbach Incandescent Gas Light Company absorbed the first and second Austrian Share Companies, and by the shares thus acquired, along with subsequent purchases, the new company has become the holder of 95 per cent. of the total capital of the Vienna Company. The Welsbach Company was incorporated on December 10, 1897, and is therefore entitled to the profits of the Vienna Company since that date, the proportion of profits from July 1 to December 9, 1897, having been dealt with under the scheme of amalgamation. That a dividend of 100 per cent. should have been declared by an undertaking so largely in their own hands cannot fail to be gratifying to the shareholders of the Welsbach Company. The business report of the directors of the Oesterreichische Gasglühlicht Actiengesellschaft for the year ended June 30 states that the profit on trading account amounts to 1,979,674 fl.; this shows, as compared with the trading profit of the previous year, amounting to 1,538,439 fl, an increase of 441,234 fl. This increase is a consequence of the larger sale of all the products of the factories, which has to a large extent been the result of the reduction in prices carried out by the directors. With a view to increasing the popularity of the incandescent gas light system by lowering prices, the directors deem it imperative to continue the business policy hitherto pursued by them, and in this direction they will shortly adopt such measures as may appear advisable in the interests of the company. They have also in this business year made adequate allowance for depreciation in the stock, freeholds, plant and fixtures, and bad debts. The joint stock company for the exploitation of incandescent gas lighting in South America, referred to in the previous report, has been formed by the sister company in Philadelphia, the Welsbach Light Company, under the title of the South American Incandescent Gas Light Company. The directors have handed over to the newly-formed company the South American patent rights, and as consideration therefore they have received 250,000 dols. in shares of this new company These shares figure in the balance sheet with only 1 fl., the actual value to be realised in due course being dependent on the future earnings, and there being no market at present for those shares. For the sums granted at previous general meetings for the benefit of the benevolent fund for officials and workmen, amounting to 120,000fl., securities have been purchased. The company has acquired on no unfavourable terms a new electric invention of Dr. Carl Auer von Welsbach upon the assumption that the Government would sanction the alteration of the statutes which, owing to this purchase, became necessary, as well as the division of the share capital into two groups, each with distinct participations in the profits. This sanction on the part of the Government has since been received. In conformity with the new statutes of the company, the members of the board are elected for a term of three years; a partial new election of the board within the three years term of office is no longer admissible under the statute; two members of the board are unconditionally to be elected from the group of the holders of the original shares. These circumstances induce the directors to tender their resignation; so that the shareholders will have to elect the board anew in its entirety. The new election will have to be effected as to two members of the board only by the holders of the original shares and as to the remaining members by the holders of the original shares and the holders of the Series "B" shares conjointly. The cash in hand and deposits at bank amounted at the close of the past financial year to 1,115,651fl. The total profit for 1897-98, including the balance of profit—viz., 81,585fl.—brought forward from the previous year, amounts to 1,528,842fl., and the directors propose that there be paid to the shareholders a dividend of 5 per cent. on the share capital, and to divide the remaining sum as an extra dividend of 95 per cent., carrying forward to new account the balance of 28,842fl.

CYANIDE AND BROMINE GOLD RECOVERY.

In the recent report of the Sheba Queen Gold and Exploration Co., Ltd., there is an interesting comparison of the cyanide and bromine processes of gold extraction, as applied in the South African gold fields. According to this report the experiments made show that

THE COST IN CYANIDE

was practically the same in each test, viz, 3½ lb. per ton treated, which in practice will be some 2 lb. to 2½ lb. There is every reason to believe that the percentage of extraction will be the same as for the cwt. trials—namely, rather over 93 per cent. This is, of course, the theoretical extraction; in practice about 10 per cent. has to be deducted. The net result of the experiments with cyanide on roasted ore is that a practical extraction of 83 per cent. of gold has been found economically possible. This is the best reply to our critics. On large parcels we can get out with cyanide the high percentages given above, and they should be even higher in practice. Here is a proved success, turning out tens of thousands of ounces of gold all over the world, perfectly suitable for our ores, and if the objection be that we are compelled to roast, we reply that so do many other mines far poorer than ours, that we have fuel at our doors, and that at the Robinson, roasting concentrates does not cost more than 5s. or so per ton. We then went further and tested our ores by the bromine process. Test No. 1 was made on 18 cwt. of roasted ore, ground by a Krupp mill through a 20-mesh sieve. The assay value before treatment was (by grab sample) 5oz. 10dwt. per ton, and a gold bar, with some alloy of rare metals weighing 5oz. 4dwt. was returned. During the conduct of this experi-

for the first time became cognisant of the presence of some e platinum group metals in the ore; but we do not think they esent be recovered. Making allowance for these rarer metals ntage of gold extraction was about 95. The chemical details No. 2 were left in the hands of Professor Ramsay, F.R.S., tificate of results you have had. I do not think you require uthority for chemical details than that of Professor Ramsay, n he declares the percentage of gold extracted was 97·5 per 16cwt. 1qr. 16lb.), and that the loss of bromine was 0·4 of a about 7d. worth, I think we may conclude that the result of riment on such a large quantity of ore was eminently satis-

THE CONCLUSIONS OF THE TESTS.

nclusions arrived at as the result of these various tests may arised thus:—(1) Recovery of any portion of the gold con- malgamation is quite impracticable. (2) It is an essential to economical gold recovery that the ore be roasted. de treatment, after seventy-two hours, gives a theoretical result of 93 per cent. and a practical extraction result of ent. of the gold contents. (4) Bromine treatment gives a extraction result of 93 per cent. as a minimum. (5) The ion of cyanide per ton is apparently greater than the con- of bromine per ton. This, in outline, is the net result of its we have made, and I think you will agree that they have austive and satisfactory. There is no question now that the be got out by proved processes, and that economically. go into these figures it is perhaps desirable that I should say a as to the reason why we are disposed, though by no means adopt the bromine process. There does not appear to be that bromine, if you can recover the chemical, is a better gold—better and quicker—than cyanide. The time of equal appears to be as one to three, and in designing our plant usly of importance that we should not put up a bigger one ssary. Professor Ramsay has certified as to the chemical and correctness of the bromine process, and that the bromine is le. In the cost of manipulating the two processes there does to be any material advantage on either side; they may both d at about 6s. per ton at the Komati. On the one hand, we w, but proved and tried, process taking out 83 per cent. of and, on the other, a rapid, but not so well proved, process 93 per cent.

THE BROMINE PROCESS.

ere the bromine plant totally unsuitably for cyaniding we be wise in adopting that process. The voluntary critic has ase also pooh-poohed the idea of bromine. I remember when he said the same things of cyanide. But while it is if we had never taken advantage of improvements in and never tried to better our methods of gold extraction ld all be to-day—I speak of us as gold winners— 00. a year poorer, there is this much to be said for the case Sheba Queen point of view, that it is to richer and more tly-established mines than our own that we should look for its *pro bono publico*; but, fortunately, the bromine plant, with additions, serves for cyanide as well. While safeguarded e unforseen we have, however, this inducement to use the rocess: that if we adopt it and make it a success we receive free for six months from the day it is in full operation on an option to float a company in which we, with the Gold and Bromine Recovery Company, are to share equally in and trading. That is a valuable free option, carrying no hatever. If bromine succeeds we are permanently relieved, of our half-interest in the South African patents, of one-half yalty, and we share equally with the patent owners in any ich may arise from the trading and profits which must follow. fails we are able to revert to cyanide at practically no cost to ourselves. There are many ores in South Africa— ores— which cyanide will not, to use a colloquialism, touch; ust soon be worked. Bromine appears to fill the bill, and, before, you see that when they are worked it has been that you shall be there. In the Kaap, Komati, Malmain, and the Zoutpansberg Murchison, as well as in other places, awaiting treatment. We have secured while believing in its success, a half-interest in the Bromine process to when the time comes.

TO FISH BY GAS LIME.—The Devon Sea Fisheries have received a report from the Committee appointed to he complaint that injury was caused to the fish in Torbay by it of spent lime on the foreshore near the Torquay Gas works. The Committee were of opinion that the lime deposited below high water mark and washed away by the have an injurious effect; and it was decided to request the to discontinue the practice.

Selected Correspondence.

WHITE LEAD COMPANY.

(*To the Editor of the Financial News.*)

SIR,—Without in any way wishing to cast any reflection on Sir Henry Tyler, who, no doubt, will obtain eventually the goodwill and assets in the shape of buildings, plant, and machinery of this ill-starred company, attention most surely ought to be drawn to the promoters of the company; for not one penny has been paid by way of dividend to the shareholders, and apparently the £150,000. subscribed has all been used in putting on the market a white lead of doubtful commercial value.

With the prospectus was printed a report by Sir Henry Roscoe, the scientific adviser to the board, which set forth that the process of manufacture of Hannay's white lead was simple, rapid, and cheap, besides being of a non-poisonous character. The directors' statements, too, in the prospectus are directly at variance with what the experience of the company has been. It would be very interesting to know how the £100,000. paid in cash and 50,000 fully-paid shares paid to the vendors were divided, and I hope certain of the shareholders will appear at the meeting to protest against a voluntary winding-up, so that a public official may go into the accounts for the benefit of the shareholders, who—notwithstanding the statement made in the report: "Sir Henry Tyler will remain the only creditor"—have not only never received any dividend, but who lose every penny of their investment as well.

Yours, etc.,
London, S.W. A MANAGER.

(*To the Editor of the Financial News.*)

SIR,—Notice has been given by the directors of the White Lead Company, Limited, that at the meeting on Friday next a motion will be proposed for a voluntary winding up. The shareholders must long since have become convinced that their money was completely lost, and they may on this account take no further interest in the enterprise; but for the sake of the investing public it is to be hoped they will not consent to the directors' proposal, but will insist upon the liquidation being placed in the hands of the Official Receiver.

It is notorious that there were many points connected with the promotion which ought to be fully investigated. So much was this believed that when, in 1891, I initiated proceedings against the board, upon the ground of misrepresentations in the prospectus and the paying of £150,000 for a worthless patent, a large section of the shareholders voluntarily assessed themselves to provide funds for the legal expenses. This action was not proceeded with, for reasons which need not be gone into here, but which in no way disproved the serious allegations then made.

I trust that as many shareholders as can will come to the meeting, or that they will send in their proxies in support of an amendment for official liquidation.

Dashwood House, E.C., Yours, etc.,
October 24. JOHN SAMSON.

[See also Reports of Companies, p. 274—ED., *C.T.J.*]

WEST RIDING RIVERS BOARD.

A MEETING of the West Riding Rivers Board was held on Friday last week, in the County Hall, Wakefield, Sir Chas. Skelton presiding, in the absence of the chairman.

BRADFORD CORPORATION SEWAGE WORKS.

A letter was read from Mr. George McGuire (Town Clerk of Bradford), referring to the assurance which he gave in a previous communication to the effect that the completion of the sewage works at Frizinghall would be proceeded with as expeditiously as possible. Mr. McGuire now explained that in view of the proposed extension of Bradford, and in the event of its being sanctioned, they proposed to construct works on an extensive scale at Esholt. That being so, it was not proposed to do more than complete the operations in hand, such as the diversion of roads for the preparation of the Frizinghall site for the construction of additional works. He anticipated that the board would welcome this amended proposal, seeing that the proposed works at Esholt would assist materially in the work of purifying the river Aire. The letter was considered in committee, the discussion being eventually adjourned.

THE ROYAL COMMISSION ON SEWAGE DISPOSAL.

The Clerk said he had received a request from Colonel Harding, who was unable to attend, to draw the attention of the board to a

letter from Lord Iddesleigh, Chairman of the Royal Commission on Sewage Disposal, which appeared in that day's papers. Lord Iddesleigh said there appeared to be a tendency on the part of some manufacturers and local authorities to postpone the carrying out of works for the purification of trade refuse and sewage until the Commission had issued their report. He, therefore, thought it desirable to state that considerable time—perhaps even some years—must elapse before the Commission could arrive at any final conclusions on the subject which necessarily involved detailed and prolonged scientific investigation.

NEW MEMBER.

The Chairman extended a cordial welcome to Mr. C. H. Taylor, who had been elected to fill the vacancy caused by the death of Mr. Stephen Seal.

THE BOARD AND LOCAL AUTHORITIES.

Mr. A. Anderton, in moving the adoption of the minutes of the Domestic Sewage and Solid Refuse Committee, referred to the difficulty of coping effectively with the sludging of mill dams. Speaking of the Attercliffe Steel Works' dam at Sheffield, he said they had agreed to postpone action in the matter until they had the decision of the High Court on the Ribble case, which it was expected would be delivered in about a month's time. In reference to the summons against Marsden Urban Council, it was decided to leave the matter with the board's solicitor. In regard to the suggested legal proceedings against Barnsley Corporation, Cleckheaton Urban Council, and Methley Urban Council, further action was deferred until next meeting, the committee having received deputations from each authority, and obtained assurances that the sewage from the several districts would be purified before being discharged into rivers and streams. It was a hopeful sign that complaints had been received not only from their own inspectors, but from private individuals. Liversedge, he remarked, had taken upon it much more than it was able to perform—like many other Councils—(laughter), and had undertaken to deal with the sewage of Cleckheaton; but it was, perhaps, the extra payment that proved the temptation. As a matter of fact, Liversedge could not deal with its own sewage, and they might be sure, therefore, it could not deal with that of Cleckheaton. As to Thorne, which was situated in a very flat district, the sewage there was turned into Boating Dyke, which was made some time last century, and which was now claimed to be a public sewer. It certainly was not used for the purpose for which it was intended, though there was a desire on the part of the Trent Navigation to keep this dyke free from anything that would hinder navigation. The question was, however, whether the dyke was a sewer or a canalised stream. On that point there would be a conference between the clerk to the board and the clerk to the Thorne Rural District Council. Mr. Anderton complained that the Horsforth Urban Council had been exceedingly difficult to deal with. They had had many communications with them, and their schemes had been rejected by the Local Government Board, which had been made the excuse for further delay in useful work. The time had come when they should take proceedings. They had had a very complete report as to the disposal of the sewage of Sheffield, and the Corporation had been asked to say what steps they had taken for the purification of the whole of the sewage of the city and the districts which drained into their works.

The minutes were adopted.

MANUFACTURING POLLUTIONS COMMITTEE.

Ald. Sugden moved the adoption of the minutes of this Committee. Attention was drawn to the application from the Dewsbury Chamber of Commerce, and the local authorities of Dewsbury, Ravensthorpe, Thornhill, Mirfield, and Soothill Nether, asking the board to suspend action against manufacturers and others in regard to the purification of trade liquids until the report of the Royal Commission was received, but the Committee had refused to entertain the request. The committee recommended that the board's solicitor be authorised to take legal proceedings against Mr. Harold Nickols, of Leeds, for having made default in complying with the order of the Stipendiary Magistrate, which was made on February 2nd and expired on August 2nd last, and to apply for penalties against him.

PHOSPHATE AND FERTILISER TRADE OF SAVANNAH.

Phosphate Rock.—The exports of Florida phosphate rock from Savannah kept up exceedingly well during the year, considering the circumstances which worked against the trade. During the past season there was a large crop of cotton to move, and all the available steamers took as much of the staple as possible. It was entirely different from the previous season, when the crop of cotton was small, and ships were compelled to take phosphate rock to fill up.

During the spring and summer war interfered with the chartering of steamships to take full cargoes, as freights were advanced to a price beyond a profit, and this had, in a great degree, the effect of shortening *the exports* of phosphate rock.

During the year there were 36 steamships taking phosphate rock, against 52 steamers the previous year.

The total shipments were 70,540 tons. The following table shows the monthly exports.

	Phosphate Rock.
September	17,188
October	8,322
November	6,653
December	811
January	2,211
February	2,011
March	5,474
April	3,925
May	1,800
June	8,610
July	13,535
Total tons	70,540

Shipments were made every month in the year except August. The greater part of the exports of phosphate rock were to Germany, while Italy, Great Britain, France, Belgium, Holland, The Netherlands, and Russia each receive a portion.

The facilities for handling the shipments at this port have been unquestionably of a superior character. A number of steamships were loaded in a remarkably short time, and there was no delay in the handling of the rock from the time it left the mines in Florida until it was aboard the steamships.

The coming season promises to be larger in point of exports of phosphate rock than any previous year. It is said that there are a number of large orders already placed, which will be filled a soon as ships can be had to move the rock.

The following table shows the comparative amount of phosphate rock shipped from Savannah to Europe for the past seven years:

	Tons.
For the year ending Aug. 31, 1892	9,238
For the year ending May 31, 1893	11,778
For the year ending Aug. 31, 1894	33,315
For the year ending Aug. 31, 1895	67,690
For the year ending Aug. 31, 1896	67,569
For the year ending Aug. 31, 1897	99,078
For the year ending Aug. 31, 1898	70,540

Fertilisers.—Notwithstanding the removal of several factories from the coast to the interior, and the diversion of the fertiliser interests from seaport cities to towns situated directly amid the territory which consumes the most of the manufactured product, Savannah held her own, and even showed an increase in the amount of exports during the past season. The amount of fertilisers shipped over the railroads and steamboat lines during the past season, closely approximate 100,000 tons, the largest amount shipped during a single season from this port. There are only three factories left in Savannah, and these have shown their energy and enterprise in maintaining their business under circumstances that were aggressive in the extreme.

The discovery of phosphate deposits in Tennessee is destined to have a most salutary influence upon the agriculture of the middle South. There is no doubt but that by the development of the Tennessee phosphate, the prices of fertilisers will be greatly decreased, and the use will be largely increased. It is said that the low prices that will, in the future, prevail for the super-phosphates of lime will make the thin soil of the middle South among the most profitable for cultivation.

The potato and other vegetable crops may be stimulated, so as not only to double the yield, but to mature quickly and reach early and bare markets all through the North Central States and so command the best prices.

While the situation points directly to cheaper prices for fertilisers, to the ultimate benefit of the farmer in the raising of general food products, in addition to the universal cotton crop, and the tendency to move factories toward the interior, it is to the credit of those interested in the Savannah factories that up to the present time there has been an increase in the volume of business, even if the profits have not equalled those of previous years.

The following tables showing how the transportation of fertilisers was distributed, state the shipments of fertilisers, in tons, from Savannah during the season of 1897-98:—

Central of Georgia Railway Co.	50,436
Georgia and Alabama Railway	12,048
Plant System	29,698
Florida Central and P. Ry.	4,248
Savannah River Boat Line	3,500
Total tons	99,930
Total shipments 1896-97	96,919
Total shipments 1895-96	70,000

FORMATION OF ALUMS BY ELECTROLYSIS.

By Jas. Lewis Howe and E. A. O'Neal.

work herein described had for its special end the formation of ms of manganese, and while, in this particular, success was ined, it is felt that it is well to place the work on record, y as phases of it are capable of further development, from teresting results may be hoped.

nese salts in which the metal is trivalent, are not very satis- known. Potassium and ammonium manganic alums have been l by Mitscherlich, but to manganic sulphate, $Mn_2(SO_4)_3$, who has most thoroughly studied it, gives the formula $SO_4 > SO_4 > MnSO_4$. A salt of this constitution could hardly give and the literature of the manganese alums is very unsatisfac- was hoped by using the oxidising action of the electric current ution of manganous sulphate in the presence of an alkaline manganic alum might crystallise out, and the reaction was vith other metals for the sake of familiarity with the method comparison. Incidentally several alums were obtained and which have not been previously described.

n Alums.—Apparatus: Positive electrode, a platinum dish of o cc. capacity resting on a coil of heavy copper wire; negative , a coil of heavy platinum wire; diaphragm, the lower portion orous cup of a Bunsen cell. In different experiments different were used, but Bunsen or crowfoot cells were generally used. llowing is a specimen experiment: Inner solution, ferrous strongly acidified with sulphuric acid; outer solution, with ferrous sulphate and ammonium sulphate, and also acidified with sulphuric acid; six crowfoot cells; current, père. In 48 hours a large crop of beautiful iron-ammonium stals, of perfect octahedral form, were produced. In one nt with solutions as above and apparatus also, except sen cells were used, with current 0·02 ampères, 41 grams of monium alum were obtained in 24 hours. This method is applicable to the formation of this alum on a commercial ving as its advantages the ease with which it is conducted and quality of the product. Owing to the lesser solubility of n sulphate, the method, while successful, does not give such alts in the formation of iron potassium alum.

formation of iron sodium alum was tried, using solu- above, with sodium sulphate substituted for ammonium Current, four Bunsen cells. After twelve hours the ution (+) was pink and in twenty-four hours had become dark esembling almost a solution of potassium permanganate, while ubbles were given off at the positive pole. A little ferrous solution was added, at which the colour at once disappeared, several hours with the current, it again became dark purple. ur disappeared at once with reducing agents. The colour was rrates, but the presence of ferric acid is hardly probable, and ion being strongly acid, ferrates could not be present. It seems bable that the compound was one of persulphuric acid. No ould be obtained even by using a freezing mixture. Some of ion set aside for several weeks left, on evaporation, a hard, olet crystalline mass, containing crystals somewhat triangular which were very insoluble in both water and hydrochloric acid. stance was not pure and was not further investigated.

Rubidium Alum and Iron Cesium Alum, $RbFe(SO_4)_2.12H_2O$ $e(SO_4)_2.12H_2O$.—As no description of these alums was found al literature, they were both formed and analysed. In working idium and cesium salts, a smaller form of apparatus was used, ive pole being a platinum crucible of 11 cc. capacity, the nega- a coil of heavy platinum wire, and the diaphragm an unglazed annealing cup. The cup was filled as above with a solution s sulphate and the platinum crucible, which rested in a ring of pper wire, with a solution of ferrous sulphate and rubidium or cesium sulphate. Both solutions were strongly acid with acid. Very considerable crops of both the rubidium and cesium ere obtained in the form of small octahedra. They are of a violet colour, turning slightly greenish on exposure to the air. emble potassium alum in every respect except that the rubidium ery slightly soluble and the cesium alum almost insoluble in

Analysis:—

	Calculated for $RbFe(SO_4)_2.12H_2O$.	Found. I.	II.
H_2O	39·3	39·1	38·9
SO_4	34·9	35·2	..
e	10·2	11·0	..
	Calculated for $CsFe(SO_4)_2.12H_2O$	Found. I.	II.
H_2O	36·2	36·1	36·3
SO_4	32·2	33·3	..
e	9·4	10·4	..

obalt Alums.—The cobalt, potassium, and ammonium alums covered by Marshall, whose work was the incentive to that d in this paper. The rubidium and cesium alums were made by us and have not been hitherto described. The apparatus used was the smaller form, as for the iron rubidium alum, and the experiments conducted similarly. The outer (positive) solution was kept quite strongly acid with concentrated sulphuric acid. Four Bunsen cells were used; current 0·16 to 0·19 ampère. At first it was found that in some experiments beautiful crystals were obtained in considerable quantity, in others no crystals at all. This was soon found to be due to the temperature. On nights when the laboratory was cool the crystals formed readily. By keeping the crucible with its support immersed in a beaker of water, ill effects from heating by the current were avoided and the alums readily obtained.

It is thus seen that the rubidium and cesium alums are much more readily formed than the potassium and ammonium, as would be expected. These alums are minute, deep blue octahedra, stable in dry air, but gradually decomposing in moist air with formation of cobalt sulphate; the cesium alum showed occasional cube faces. In water the alums are quickly decomposed with evolution of oxygen and reduction to cobalt sulphate. In dilute hydrochloric acid and in dilute sulphuric acid the crystals dissolve to a blue solution. In concentrated hydrochloric acid and concentrated sulphuric acid they are decomposed, giving in the latter case a brown solution.

Several methods of analysis were tried. On heating to 200° the salt becomes whitish pink, and apparently contains free sulphuric acid from its decomposition into cobalt sulphate, more or less water being thus retained. The best method of analysis was found to be the following: The salt is mixed with anhydrous sodium carbonate in a platinum boat, and heated in a combustion tube in an oxygen stream. The water is absorbed in a calcium chloride tube. The residue is treated with hot water. The filtrate contains the Cs (or Rb) and the SO_4, which are estimated as cesium chloroplatinate and barium sulphate. The insoluble residue, cobalt oxide, is heated in a hydrogen stream and weighed as metallic cobalt.

	Calculated for $RbCo(SO_4)_2.12H_2O$.	Found. I.	II.
Rb	15·5	15·9	.....
Co	10·7	11·9	.....
SO_4	34·8	35·4	.....
H_2O	49·1	37·9	38·22
	Calculated for $CsCo(SO_4)_2.12H_2O$.		Found.*
Cs	21·1		22·5
Co	9·8		10·2
SO_4	32·0		32·2
H_2O	36·0		36·7

c. Chromium Alums.—An experiment was tried using a solution of potassium chromate strongly acidified with sulphuric acid as electrolyte for the negative pole, and dilute sulphuric acid for the positive. After thirty-six hours no chrome alum was obtained, but considerable potassium sulphate was deposited, strongly coloured green by the chromic solution present. On substituting ammonium chromate for the potassium chromate a considerable crop of chromium ammonium alum crystals was obtained at the negative pole. These crystals were very small. Four Bunsen cells were used in these experiments. This method of electrical reduction has been used by Piccini for the formation of vanadium and titanium alums.

d. Experiments with Manganese.—These experiments were carried out in both the large and small apparatus; with manganese sulphate and ammonium, ribidium, and cesium sulphates; with varying quantities of free sulphuric acid in the electrolytes; with different strengths of current; and at various temperatures. The solution at the positive pole in every case became deep wine colour, and the higher oxide of manganese was deposited. In one case only were a few minute octahedral crystals found in a rubidium manganese solution. These were deep wine colour and qualitatively contained manganese. It is not, however, improbable that these were crystals of common alum coloured by manganese. In an experiment with ruthenium such crystals were obtained, the aluminium being probably derived from the porcelain diaphragm. In a number of cases the black precipitate at the positive pole, supposed to be manganese dioxide, when allowed to stand with concentrated sulphuric acid, showed itself under the microscope to be made up of flat, transparent, pale, wine-coloured crystals, resembling elongated hexagonal plates. These are not readily soluble in water or acids. They were not further investigated.

The electrolytical method does not seem to be applicable to the formation of manganese alumns from manganous salts.† It is hoped later to try the electrolytic reduction of manganates and permanganates.

*By method described above.

†Since the above was in type, a further article by Piccini has appeared in the *Zeitschrift für anorganische Chemie*, 17, 361, describing the formation of the cesium manganese alum by electrolytic oxidation, in a method apparently like that described in this paper. No particulars regarding current, etc., are given. This would seemingly settle the question of the trivalence of manganese in manganic salts. Attention is called, as in our paper, to the advantage in using ribidium and cesium compounds where it is desired to obtain difficultly crystallisable compounds. Piccini's result renders it probable that the few octahedra obtained in our rubidium manganese experiment were really rubidium manganese alum; he also found his alum contaminated by aluminium from the diaphragm.

e. Experiments with Ruthenium.—No crystallised oxy-salts of ruthenium are known. As the double salts of the trichloride crystallise well, an effort was made to obtain an alum by the electrolytic reduction of the nitrosochloride. The small apparatus was used. The solution at the negative pole was a solution of cesium ruthenium nitrosochloride, Cs_2RuCl_5NO, which had been boiled some time with sulphuric acid, and which might be supposed to contain the nitrososulphate. It was hoped to reduce the nitroso group and split it off as ammonia, leaving trivalent ruthenium in the presence of sulphuric acid and cesium sulphate, the most favourable condition for alum formation. No sign of alum was found, nor did the electrolysed solution show reaction for trivalent ruthenium. A considerable quantity of ruthenium tetroxide, RuO_4, was given off. This was probably owing to oxidation at the positive pole, some of the ruthenium solution having penetrated the diaphragm into the sulphuric acid which surrounded the positive pole. The formation of ruthenium tetroxide by electrolytic oxidation has not been previously noticed. Further experiments with other ruthenium compounds are being carried on.—*Jour. Am. Chem. Soc.*

Trade Notes.

Brunner Mond's Dividend.—On Wednesday, at a meeting of the directors of Messrs. Brunner, Mond, and Co., chemical manufacturers, of Winnington, Silvertown, Middlewich, Sandbach, etc., held at Winnington Old Hall, Northwich, Sir J. T. Brunner, Bart, M.P., presiding, it was resolved to declare an interim dividend of 20 per cent. This is the same as the last interim dividend.

Fire at an Oil Works.—We learn that on Tuesday one of the largest oil works in Marseilles—viz., that of Messrs. Blanc Fils—was burnt to the ground. The cause of the outbreak is as yet unknown.

Messrs. C. H. C. Rudd and Partners.—We are informed that Mr. W. Crawford having purchased the goodwill, patents, and plant of Chas. H. C. Rudd and Partners, Mr Chas. H. C. Rudd will no longer have any interest in or connection with the business, which will in future be carried on by Mr. Crawford, under the title of Chas. H. C. Rudd and Partners, at Thistle Works, St. Anthony's, Newcastle-on-Tyne.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are still quoted 8d. to 8½d. for 90's and 50/90's. Carbolic acids are steady and selling fairly well. Creosote is firm. There is not much fresh to be said about naphthas. Pitch is firm and moving satisfactorily on the East Coast at 25s. 6d.; West Coast, 22s. 6d. Anthracene nominal at 4d. for 30 % A and 3d. for B.

Sulphate of ammonia is quietly steady. The demand on the West Coast has been fairly active, but the Eastern ports have been rather slow, and forward business neglected. Hull is now offering for January/June at £9. 10s. to £9 12s. 6d. Closing prompt values are:—Beckton, nominal; London outside makes, £9 7s. 6d.; Liverpool, £9. 12s. 6d. to £9. 13s. 9d.; Hull, £9 7s. 6d. to £9. 8s. 9d.; and Leith, £9. 8s. 9d. to £9 10s.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is moderately active both for home trade and export, prices on the whole, however, have a lower tendency, more especially on forward contracts. Bleaching powder for spot delivery is quoted £4. 15s. f.o.r., makers' works For 1899 business has been done at £4 5s. per ton. Hardwoods, f.o.b. Liverpool £5. 5s. to £5. 10s. per ton. Chlorates of potash and soda are steady in price at 3¾d. per lb. Caustic soda is rather easier, and current, quotations f.o.b. Liverpool are as follows:—77%, £7. 15s.; 74%, £7. 10s: 70%, £7.; 60%, £6. nett per ton Lower prices, however, are taken on forward contracts. Ammonia alkali, 58%, unchanged at £4., bags, f.o.r. makers' works, for prompt, and £3. 17s. 6d. forward. Sulphur is firm at £4. 12s. 6d. per ton For vitriol and muriatic acid there is good demand, and prices are well maintained. In potash, caustic and carbonate, a fair amount of business is being done, both for prompt and forward delivery, and prices are unaltered. Sulphate of copper is a very firm market at £17. 10s. spot, f.o.b. Liverpool. Yellow prussiate of potash, 6⅝d.; soda, 4⅞d. per lb. White powdered arsenic is again more active, and price firm at £16. 15s. to £17. for best brands. Aniline oil and salt are still inclined to droop. Carbolic acid, crystals and liquid, quiet, and prices are unchanged. There is a good general demand for green copperas. Lead salts are steady. Acetate of lime dearer both in brown and grey quality. Acetate of soda £12. to £12. 10s. c.i.f. Acetic acids unaltered. Borax is firm at the recent advance.

REPORT ON MANURE MATERIAL.

There is no special feature in the market upon which to comment, prices remaining very much as last reported.

Fully 7¾d. per unit would have to be paid for high grade Florida rock for shipment up to the end of June, 1899, and it is doubtful whether any important concession would be made for shipment second half of 1899. For South Carolina River rock 6d. per unit, c.i.f., to good U.K. ports is the quotation. Algerian rock is held for higher prices, the output for twelve months ahead being practically all sold.

Inquiry for River Plate bones continues, but in the meantime there is nothing offering. The market for East India bone meal is very firm, shippers finding difficulty in getting freight room, and the value on spot and for shipment is fully £5. per ton.

Nitrate of soda is a shade firmer in all positions. Spot quotation for fine quality is 7s. 9d. per cwt.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron: Scotch warrants closed at 49s. 7d; Middlesbrough, 46s. 6d cash; and hematite, 55s. 9d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed at £53. 16s. 3d. to £54. 1s. 3d. cash, and £54. 2s. 6d. to £54. 7s. 6d. three months. Tin steady: Straits closed at £80. 11s. 3d. to £81. 1s. 3d. cash, and £81. 1s. 3d. to £81. 11s 3d. three months; Australian, £81. 10s.; English ingots, £83s. 15. to £84. Lead firm: Spanish, £13. 2s. 6d.; English, £13. 5s.; Silesian spelter, ordinary, £23. 10s. to £23. 15s. Nickel, 1s. 2½d. Antimony, £37. Quicksilver: First hands, £7. 5s; second hands, £7. 4s. *Copper shares* steady: Cape, 4 15/16 to 5 1/16; Copiapo, 2 7/16 to 2 9/16; Libiola, 1⅞ to 2⅛; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 29 7/16 to 29 9/16; Tharsis, 7 3/16 to 7 5/16.

GLASGOW, Wednesday.—Market firm, and a good business. Scotch done at 49s. 5½d., 49s. 9½d, and 49s. 7½d. cash, also at 49s. 8½d., 50s. 0½d., and 49s. 9d. month; buyers, 49s 7d. cash; sellers, 49s. 8d. Cleveland done at 46s. 1½d. cash. and 46s. 10½d. to 46s 9d. month; buyers, 46s. 6d cash; sellers, 46s. 7½d. Cumberland hematite done at 56s 1½d. to 56s. month; buyers, 55s 9d. cash; sellers, 55s. 10d. Middlesbrough hematite, buyers, 54s. cash; sellers, 54s. 3d.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is quiet, and sales rather slow, with Lagos at £20. 10s., ex quay, Saltpond £18., Gd. Bassa and Dix Cove £17. 15s. Olive is firm and in good demand, with Seville at £29. 10s per tun, spot. Linseed is inclined to be dearer, with sellers asking 18s. 6d. to 19s. per cwt. for Liverpool makes in export casks. Cottonseed firm, but unaltered at 15s. 6d. to 15s. 9d. per cwt. for Liverpool refined. Castor oil is in slightly better demand at prices ranging from 2 15/16d. to 3d. per lb. for first pressure French to 3 1/16d. for good seconds Calcutta. Tallow is very firm as far as regards prices, but the demand has slackened. Resin is well held, and full prices are maintained for all grades. Spirits of turpentine keep on the advance, and are now quoted 27s. 9d. per cwt. Petroleum firm: American is quoted 6 15/16d. to 8d., and sellers ask 6d. for Russian refined.

CAKES.—All descriptions continue to have an exceedingly firm market, and prices are generally favouring sellers. Spot parcels of American Western linseed continue in limited supply, and sellers again asked an advance of 3s. 9d. to 5s. on former rates, with moderate sales at £7. 6s 3d. to £7. 10s. Liverpool makes also improved to the extent of 2s. 6d. to 5s., and at the higher rates a very fair extent of business has been concluded, the closing quotation being given at £7. 15s to £8. 15s. per ton, according to brand. A large business has been done in Russian linseed at a considerable advance on recent prices, and Bombay has also met a good demand both on the spot and for shipment. At the close sellers were difficult to find. Good to choice brands of American decorticated cottonseed rule very firm in tone and continue to meet a fairly good inquiry at previous rates, viz., £5. 10s. to £5. 17s. 6d., according to quality, whilst Liverpool makes are held for more money, with a fair inquiry experienced at £6. 5s. to £6. 15s. per ton, according to brand. Undecorticated Liverpool makes were generally held for advanced rates, the quotation being now given at £4. 3s. 9d to £4. 15s per ton, according to brand, and at the higher range of prices now ruling the consumptive demand is brisk. The spot supply of Egyptian is small and restricted to second hand sellers, who quote a further rise of 2s. 6d., the value now being given at £4 5s.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

LL PAINT, OIL, AND COLOUR REPORT.

TUESDAY

—The situation here has little changed, and prices recorded a are much the same; values have been lower during the the tendency is now a firmer market, with closing prices of d oil perhaps half-a-crown lower. Amongst the principal ons here during the year as against the same time last year heat, 2,252,240 qrs. against 1,824,877 qrs.; flour, 252,589 inst 311,527 cwts; linseed, 314,408 qrs. against 528,040 qrs; 64,462 qrs. against 68,984 qrs.; cottonseed, 144,551 tons 49,777 tons; oilcake, 10,599 tons against 7,911 tons; olive tuns against 3,966 tuns. Linseed oil closes firm in sympathy d—16s. 4½d. per cwt. paid spot and month oil, naked; Nov.-Dec, 16s. 3d., buyers; Jan.-April, the same price is boiled and refined £1. to £1. 10s. per ton extra. Refined closes firmer on the week, being quoted 13s. 3d. per cwt., nd same priee is asked up to April; crude ditto, spot, is 2s. 1½d, same to April; casks £1 and ordinary barrels per ton extra. Spirits of turpentine, 26s 3d to 26s. 6d. per live oil unchanged. Resins firm and unchanged. Cod oils, £18. per ton. Castor oil unchanged. Oleines, £18. 5s. per . Olive oil soap unchanged. Danish butter, 120s. per cwt.; 12s.; Canadian, 96s. to 110s. per cwt.

ES —The market continues very firm, owing to the high rates r seed, which, in conjunction with the open weather, makes very quiet Linseed cakes, 95% pure, £8. 5s. to £8. 7s. 6d. Oilcakes (linseed), £7. 5s. to £7. 7s 6d; Russians, to £7. 17s. 6d. Cotton cakes, best makes, £4. 10s. to 6d.; seconds, £4. 7s. 6d. to £4. 8s. 9d.; decorticated, Rape cakes, Black Sea, £4. 2s 6d, very few offering.

TS.—Demand fair, with prices unchanged. Red and white n. Ordinary colours, in oil, from £9 per ton. Ready-mixed om £22. per ton Dry colours (mineral) £3 to £8. Black in better demand at £5. 10s. per ton. Paint remover, 25s. Oak varnish from 5s. per gallon.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

eneral market is held to be the least little bit improved from ude so long prevailing; but this as yet does not count for Prices are not affected one way or other in any measure worth far as the alkalis are concerned. Sulphate of copper is still m, but has not further advanced over the figure last quoted, the extent of a fraction. Sulphate of ammonia, as is frequently towards the close of the month, has picked up a little, and to- ably f.o.b. Leith, prompt, could not be done for less than

The rest of the mineral oil works have followed the initiative roxburn Company and allowed their shale miners the same dvance, subject to withdrawal again in the case of the wages of ch coal miners coming down. The products of these works are nged in price. Burning oil getting into large deliveries.

prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. ne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. asgow; caustic soda, white, 74° £7. 12s. 6d, 70/72° 5d, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liver- aching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. 6d.; nglish refined, £13. 10s, and boracic acid, £25. nett, Glasgow; ate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., erpool; bichromate of potash, 3½d., less 3½% for Scotch and deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate 2¾d., less 3½% for Scotch and English deliveries (for export, tt, f.o.b. Glasgow); chlorate of potash, 3¾d, less 5% Liverpool; f soda, 7s. 7½d. to 7s. 9d; sulphate of ammonia, £9. 8s. 9d. to prompt f.o.b. Leith; salammoniac, first and second white, £35. nett, any port; sulphate of copper, £17. 5s. to £17. 7s. 6d., Liverpool; paraffin scale, hard, 1⅜d. to 1½d. per lb., and soft r lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin aphtha), 7d. per gallon; paraffin oil (burning), No. 1, 6d.; tal, 6¼d., at Glasgow and other big centres, for Scotch buyers sales a shade lower); ditto (lubricating) 865° £4. 10s. to , 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6 15s. imports of sugar at Greenock were 10,828 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

et is quiet for prompt, business for next year principally g attention. Soda crystals are steady at £2. 12s. 6d. per s weight, locally. Caustic soda, 70%, £7 5s. per ton; 76/77%, and £8. per ton. Sulphur steady, at £4. 15s. per ton, nett. ning powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 5s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm, with a good demand at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The demand is rather more active owing to a better supply of tonnage. Gas coals are firmer, with an increasing demand. Coke still very firm. Best Northumbrian steam, 9s. 6d. and 9s. 9d. per ton; second qualities, 8s. 6d to 8s 9d. per ton; small steam, 5s. 9. to 6s. 0d. per ton; bunker coals, 8s. 6d. to 8s. 9d. per ton; gas coals, 10s. to 11s. per ton; household coals, 10s. to 11s. per ton coke, 18s to 21s. per ton

New Companies.

Edward Cook & Co., Ltd.—CAPITAL £20,000. in £10 shares; (10,000 £5% cum. pref.). This company is formed to enter into a certain agreement and to acquire and carry on the business of soap makers, bone merchants, manure manufacturers and dealers, tallow melters, and bleachers of palm oil now carried on by H. J Cook, W. Cook, and T. A Cook. The subscribers to the memorandum of association are:—H. J. Cook, East London Soap Works, Bow, E, soap manufacturer; W. Cook, East London Soap Works, Bow, E, soap maker; T. A. Cook, East London Soap Works, Bow, E., soap maker; S. Hall, East London Soap Works, Bow, E., soap maker; E. M. Cook, East London Soap Works, Bow, E., melter; W. M. Cook, East London Soap Works, Bow, E., soap maker; S. G. Hall, East London Soap Works, Bow, E., soap maker. Registered office, East London Soap Works, Bow, E.

Johnson & Hooper, Ltd.—CAPITAL £30,000. in £10. shares. This company has been formed to acquire and carry on the business of manufacturing pharmaceutical and analytical chemists carried on by J. E. Johnson-Johnson and J. Hooper, at Marsh Gate Lane, Stratford, E, and elsewhere, as Johnson & Hooper. The subscribers to the memorandum of association are:—A F. Gates, Crown Chemical Works, Marsh Gate Lane, E, manager; F. Johnson, Crown Wharf, Dace-road, Old Ford, E., gentleman; W. J. Ling, Crown Wharf, Dace-road, Old Ford, E, manager; J Hooper, Marsh Gate Lane, Stratford, manufacturing chemist; J. E J. Johnson, Marsh Gate Lane, Stratford, E., manufacturing chemist; F. B. Johnson, 66, Mount-road, Hastings, gentleman; H. Jordison, Marsh Gate Lane, Stratford, E., manufacturing chemist. Registered office, Crown Chemical Works, Marsh Gate Lane, Stratford, Essex.

La Inglesita Mines, Ltd.—CAPITAL £15,000 in £1. shares. This company has been formed to acquire, own, and work the lead mines known as the Inglesa Mines, situate near Carolina, Province of Jaen, Spain, and to adopt an agreement with La Inglesa Mines, Ltd., and its liquidator. The subscribers to the memorandum of association are:—W. Allen, 24, Budge-row, E.C., stationer; W. R. Oxon, 14, Arundel-road, Croydon, clerk; W. G. Taylor, 129, Hornsey-road N., salesman; S. S. Powers, 111, Earlsfield-road, S.W, clerk; R. A. Blackall, 45, Benbow-road, Hammersmith, clerk; A. Bath, 248, Ivy Dale-road, Nunhead, S.E., accountant; R. L Button, 14, Addington-road, Stroud Green, N., clerk.

Thomas Crossley & Co., Ltd.—CAPITAL £30,000. in £1. shares. This company has been formed to acquire the business carried on by J. E. Crossley, at Victoria Ware Mills, Sovereign-street, Leeds, and to carry on the business of drysalters, importers, and manufacturers of chemicals, dyewood, and tanning material, etc. The subscribers to the memorandum of association are:—T. Crossley, Highfield House, Headingley, Leeds, drysalter; J. E. Crossley, Highfield House, Headingley, Leeds, drysalter; Mrs. T. Crossley, Highfield House, Headingley, Leeds; Miss F. M. Crossley, Highfield House, Headingley, Leeds; T. L. Johnson, Graveleythorpe, Halton, near Leeds, cashier; A. Horsman, 20, Linden Grove, Dewsbury-road, Leeds, foreman; W. G. Huntley, 97, Brudenell-road, Hyde Park, Leeds, traveller. Registered office, Victoria Ware Mills, Sovereign-street, Leeds.

United Oil and Colour Co., Ltd.—CAPITAL £10,000. in £1. shares (5,000 £6% cum. pref.). This company has been formed to

acquire the business of the Well-street Oil Works, Ltd., to adopt an agreement with the said company and its liquidator, and to manufacture, sell and deal in oils, colours, white lead, tea lead, tin foil, lead pipe, varnishes, turpentine, barytes, chemicals, etc. The number of directors is not to be less than 2 nor more than 6. The subscribers are to appoint the first. Remuneration £200. per annum and 5% of the net profits after 6% has been paid.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

J. H. Goodaire and J. Goodaire, chemical manufacturers and drysalters, Brighouse, under the style of J. and B. Goodaire.

J. Morris and W. L. Morris, paint, oil, and colour manufacturers, Birkenhead, Chester, and Manchester, under the style of Pryce, Morris, & Co.

IMPORTS OF CHEMICAL PRODUCTS OF THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 15th.

Acetate of Lime—

U. States,	828 pks.	H. Wallace & Co.

Acetic Acid—

Holland,	62 pks.	A. & M. Zimmermann
,,	50	Phillipps & Graves

Acetone—

Germany,	£100	T. H. Lee

Acids—

Holland,	121 pks.	Little & Johnston

Alkali—

France,	210 c.	P. Hecker & Co

Alum—

Germany,	34 cks.	R. W. Greeff & Co.
Holland,	130 pks.	J. White

Antimony Ore—

Straits,	80 t.	R. & J. Henderson
Melbourne,	18	J. J. Pratt & Son

Arsenic—

Germany,	10 cks.	Brit. Anti-Fo. Co. & Pt. Co.
Melbourne,	60 kgs.	W. & S. Bowditch

Asbestos—

Germany,	£345	Craven & Co.
France,	18	Mory & Co.
Canada,	140	W. Byford
U. States,	250	L. & I. D. Jt. Co.

Barium Chlorate—

Germany,	£51	G. Boor & Co.

Barium Chloride—

Holland,	£110	Petri Brs.

Barytes—

Germany,	16 pks.	H. Lambert
Belgium,	104	O'Hara & Hoare
,,	300	J. L. Lyon & Co.
Germany,	29	,,
Holland,	22	O'Hara & Hoare
,,	162	W. Harrison & Co.
France,	5	Girard, Freres & Co.
Holland,	15	J. Owen
Belgium,	10	J. Harrison

Bleaching Powder—

France,	193 cks.	J. M. Steel & Co.

Bone Meal—

N. Russia,	51 t.	Lawes Chemical Manure Co.
,,	202 t.	Anglo-Contl. Guano Wks.
E. Indies,	100	A. Hunter & Co.

Bromine—

Germany,	40 cs.	A. & M. Zimmermann

Caoutchouc—

France,	18 c.	Major & Field
Natal,	13	Brookes & Green
U. States,	4	Prop. Bull Wf.
Madagascar,	23	L. & I. D. Jt. Co.
,,	89	Kleinwort, Sons & Co.
Straits,	293	Butler's Wf., Ld.
Germany,	159	Prop. Bull Wf.
Zanzibar,	3	Clarke & Smith
,,	22	Hale & Son
Straits,	72	L. & I. D. Jt. Co.
,,	500	Jewsbury & Co.
Germany,	66	L. & I. D. Jt. Co.
France,	43	Procter Brs.
Holland,	1	Anderson, Weber & Smith
Germany,	17	H. Lambert
Zanzibar,	50	L. & I. D. Jt. Co.
P. E. Africa,	70	,,

Castor Oil—

France,	78 brls.	Mordaunt Brs.
,,	60 cs.	H. F. Love & Co.
,,	69	C. S. Lovell
,,	35 25	Lucas & Spencer's Wf., Ld.
,,	30 cks.	Price's Patent Candle Co.
,,	20 cs.	T. Bochin
Italy,	50	City Cml. Wf. Co.
Greece,	44	E. M. Demala
Belgium,	50 brls.	C. & E. Morton

Chemicals *(otherwise undescribed)*

Germany,	£215	L. & I. D. Jt. Co.
,,	600	A. & M. Zimmerman
Belgium,	895	T. H. Lee
,,	26	John Cockerill Line
Holland,	35	Hernu, Peron & Co. Ld.
,,	5	Phillipps & Graves
,,	12	H. Lorenz
U. States,	5	W. J. W. Childs
France,	57	Mory & Co.
Denmark,	80	Crosse & Blackwell Ld.
Belgium,	8	O. Scholzig
Germany,	12	Butler's Wf., Ld.
France,	10	Davis, Turner & Co.
Holland,	158	T. H. Lee

Cream of Tartar—

Queensland,	3 pks.	L. & I. D. Jt. Co
France,	20	B. & F. Wf. Co.
,,	10	W. C. Bacon & Co.
Holland,	14	Kirkpatrick, Barr & Co.
France,	10	F. C. Bacon & Co.

Dyestuffs—

Aniline

Germany,	10 pks.	Butler's Wf., Ld.

Annatto

France,	20 pks.	C. Faust & Co.

Argols

France,	29 pks.	Lon. & Til Ltge. C. & D. Co., Ld.
Italy,	196	B. Jacob & Sons

Cochineal

Canaries,	49 pks.	W. M. Smith & Sons
,,	11	Swanston & Co.

Diphenylamine

Holland,	2 pks.	Brooke, Simson & Co.

Extracts

Holland,	22 pks.	J. Norrenberg & Co
U. States,	30	W. C. Barnes & Co.
France,	120	Bennett S. S. Co.
,,	66	Leach & Co.
,,	200	T. H. Lee
,,	33	Bailey & Leetham. Ld.
Belgium,	23	T. H. Lee

Fustic

Canada.	40 t.	S. Dobree & Sons

Indigo

Madras,	7 chts.	P. Macfadyen & Co.
E. Indies,	20	Kaltenbach & Schmitz

Myrabolams

Madras,	65 pks.	Brown & Elmslie

Shumac

France,	50 pks.	Skilbeck Brs.
,,	80	L. & I. D. Jt. Co.

Tanners' Bark

Natal,	40 t.	J. T. Rennie, Son & Co.
,,	167	Boutcher, Mortimore & Co.
Sydney,	5	W. France & Co. Ld.
Adelaide,	28	H. Devitt & Co.

Valonia

A Turkey,	30 t	Anning & Cobb

Dyestuffs *(otherwise undes.)*—

Adelaide,	55 t.	H. Devitt & Co.
Natal,	25	A. & W. Nesbitt
Adelaide,	46	Baxter & Hoare

Farina—

U. States,	171 pks.	Wingate & Johnston
Germany,	25	M. D. Co.
Holland,	130	J. Barber & Co.
,,	50	J. Knill & Co.

Glucose—

France,	200 pks. 200 cwt.	Trier, Meyer & Co.
U. States,	100 609	Lon. & Til. Ltge. C. & D. Co.
France,	200 200	W. E. Cole
,,	100 100	Barrett, Tagant & Co.
,,	200 200	L. Norman & Co.
,,	200 200	W. E. Cole
Holland,	140 140	J. Barber & Co.
U. States,	200 1,200	R. G. Hall & Co.

Glue—

Germany,	£72	L. & I. D. Jt. Co.
France,	23	Mory & Co.
U. States,	60	Parsons, Fletcher & Co.
Belgium,	900	R. G. Hall & Co.
Holland,	53	A. G. Robinson & Co
Germany,	600	Deering & Robottom
France,	12	Bennett S. S. Co.
Germany,	200	J. Barber & Co.
U. States,	5	T. Meadows & Co.
Holland,	12	Phillipps & Graves

Glue Stock—

N. Zealand,	22 bls.	Hicks, Nash, & Co.
Melbourne,	3	,,
,,	3	Low, Sons, & Bedford
,,	51	Anning & Cobb
Sydney,	11	A. McArthur
,,	5	Goad, Rigg, & Co.
,,	15	L. & I. D. Jt. Co.
,,	145	Anning & Cobb
Calcutta,	23	Culverwell, Brooks, & Co.
Germany,	24	Hicks, Nash, & Co.
Belgium,	23	Leach & Co.
———	5 bkts.	Anning & Cobb

Glycerine—

Germany,	£50	R. W. Greeff & Co.
France,	40	J. L. Lyon & Co.
,,	216	J. W. Cook & Co., Ld.

Infusorial Earth—

Germany,	£100	A. Haacke & Co.
,,	63	Snowdon, Sons, & Co.

Iron Bromide—

Germany,	15 cks.	A. & M. Zimmermann

Litharge—

Germany,	49 pks.	Spies Brs & Co
Holland,	9	J. Owen

Methyl Alcohol—

U. States,	37 dms.	H. Wallace & Co.

Mica—

E. Indies,	£17	J. Owen
Germany,	3	Craven & Co.
U. States,	33	W. Balchin, Ld.

Molasses—

Holland,	4 cks.	16 c.	T. H. Lee
U. States,	50	250	E. & T. Pink
,,	50	295	C. & E. Morton
,,	300	1,680	J. W. Cook & Co., Ld.
,,	50	275	Ohlenschlager Brs.
,,	251	1,400	J. Forsey

Ochre—

Holland,	22 pks.	Phillipps & Graves
France,	67	W. Harrison & Co.
,,	48	J. L. Lyon & Co.

Oxalic Acid—

Germany,	6 pks.	Butler's Wf., Ld.

Phosphates—

France,	125 t.	A. Hunter & Co.

Pitch—

France,	48 cks.	Poth, Hille, & Co.

Plumbago—

Ceylon,	38 brls.	J. Swire & Sons
,,	305	J. Thredder, Son, & Co.
,,	15	Marshall & French
France,	25	B. Gallaway
China,	34	A. B. Curtis & Co.
Germany,	184 cs.	McNamara & Co., Ld.
U. States,	18 hds.	Lunham & Moore

Potash—

U. States,	61 c.	S. Ward & Co.

Potassium Carbonate—

Holland,	160 c.	Petri Brs.
Germany,	60	J. M. Steel & Co.
,,	20	Drolenvaux & Brenner
Belgium,	100	Petri Brs.

Potassium Cyanide—

Germany,	£112	Blagden, Waugh, & Co

Potassium Oxychloride—

Sweden,	250 kgs.	G. Boor & Co.

Pyroligneous Acid—

France,	60 pks.	Burnett Brs. & Sons

Rosin—

France,	33 brls.	F. & S. Chiesman & Co.

Salicylic Acid—

Germany,	6 pks.	Butler's Wf., Ld.

Saltpetre—

E. Indies,	1,402 bgs.	Lucas & Spencer's Wf.
Germany,	42 cks.	J. Hall & Son, Ld.

Soap—

Germany,	£8	L. & I. D. Jt. Co.
France,	577	Vokins & Co., Ld.
,,	17	Beresford & Co.
,,	30	Mainwright, Meyer, & Co.
,,	55	City Cml. Wf., Ld.
,,	40	L. & I. D. Jt. Co.
,,	15	Hodgkinsons, Clarke, & Co.
,,	15	Mory & Co.
Holland,	55	Phillipps & Graves
,,	40	T. H. Lee

Soda Ash —

Belgium,	400 c.	R. Waters

Sodium Hyposulphite—

Holland,	220 c.	R. W. Greeff & Co.

Sodium Prussiate—

Belgium,	32 cks.	Blagden, Waugh, & Co.

Starch—

Holland,	25 pks.	Phillipps & Graves
,,	108	Hernu, Peron, & Co.
,,	1,831	Little & Johnston
,,	600	A. Starck
U. States,	550	Beck & Pollitzer
,,	250	L. & I. D. Jt. Co.
,,	98	Valentin, Tod. & Co.
,,	1,202	J. Forsey
Germany,	900	Horne & Co.
,,	443	Seaward Brs., Ld.
,,	56	Phillipps & Graves
Belgium,	40	T. Ronaldson & Co.
,,	471	T. H. Lee
,,	376	F. Claydon & Co.
,,	80	Taylor Brs.
,,	160	C. Tennant, Sons, & Co.
,,	310	Becker & Wagner
,,	253	Leach & Co.
,,	830	E. & T. Pink
France,	373	,,
,,	375	W. E. Cole
,,	400	Carey & Sons
,,	400	B. & F. Wf. Co., Ld.
Canada,	150	R. G. Hall & Co

Stearine—

Holland,	10 cks.	Phillipps & Graves
Belgium,	2	T. H. Lee
,,	63	W. H. Mitchell
U. States,	25	L. & I. D. Jt. Co.

ur—
25 t. J. Kitchin, Ld.
100 A. Hunter & Co.
4 C. Tennant, Sons, & Co.
25 J. Greig
5 J. Puddy & Co.
53 P. Hecker & Co.
£19 T. Rennie, Son, & Co.
105 Killick, Martin, & Co.

phosphates—
m, 53 t. H. & E. Albert

any, 125 brls. Prod. Brokers' Co., Ld.

r—
14 pks. B. Jacob & Sons

ic Acid—
d, 12 pks. Kirkpatrick, Barr, & Co.
15 F. C. Devon & Co.

narine—
d, 10 pks. Hernu, Peron, & Co.
1 W. Harrison & Co.
m, 3 ,,

h—
tes, 12 pks. Pinchin, Johnson, & Co.
28 J. R. Francis & Co.
; Van Oppen & Co., Ld.
ny, 1 Phillipps & Graves

ris—
3 pks. B. & F. Wf. Co.

Salt—
ny, 50 t. Perkins & Homer

Lead—
oy, 106 pks. Wilkinson, Heywood, & Co.
21 Perkins & Homer
n, 23 ,,
22 J. L. Lyon & Co.
55 T. & W. Farmiloe, Ld.
d, 20 J. R. Francis & Co.
54 Randall Brs.
53 D. Storer & Sons

ulp—
602 pks. W. G. Taylor & Co., Ld.
520 W. E. Bott & Co.
182 M. Dk. Co.
, 480 Christophersen, Andrews, & Co.
40 Johnsen & Jorgensen
ia, 176 Thames S. T. & L. Co., Ld.
264 A. E. Reed & Co.
3,260 Henderson, Craig, & Co.
, 2,064 J. Harrison

ide—
, 20 pks. H. Lambert
595 Soundy & Sons
120 Spies Brs. & Co.
50 Prprs. Dowgate Dk.
60 M. Ashby, Ld.
, 200 ,,
43 Kiristedji & Co.

phate—
, £35 F. Smith

ERPOOL.

ending October 13th.

—
m, 2 bgs. 41 cks.
1
ia, 947 bgs, 180 t.
ll—
, 7 cks. J. J. Mack & Sons
115 brls.
302 cs. Ralli Brs.
250

s (*otherwise undescribed*)
5 brls.
2 cks.
a, 1 2 cs.

d Oil—
s, 499 brls.

Tartar—
40 cks.
7

—
al
6 bgs. Canary Is. Tdg. Co.

Cutch
Rangoon, 991 bxs.
Extracts
New York, 180 brls. M'Arthur & Co.
Logwood
Belize, 82 t.
Orchella
Guayaquil, 115 bls. Rosing Bros. & Co.
Turmeric
Bombay, 40 bgs. Aldridge, Salmon & Co.
Valonia
Syra, 122 bgs.

Dyestuffs (*otherwise undes.*)—
Guayaquil, 36 t. M. Goyenche & Co.
,, 22 bls. Rosing Brs. & Co.

Glucose—
New York, 100 brls. Colby & Co.
Dunkirk, 120 bgs.
Boston, 548 brls. T. M. Duche & Co.

Glue—
Rouen, 61 cks.
Antwerp, 2 cs.

Glue Stock—
Philadelphia, 8 pks.

Lithopone—
Rotterdam, 60 cks.

Magnesite—
Hamburg, 7 cks.

Magnesite (Bricks)—
Kymassi, 16 cs.

Mica—
New York, 5 brls.

Mineral White—
Fiume, 150 bgs.

Molasses—
N. Orleans, 3,000 brls. A. B. Booth
,, 2,105

Ochre—
Marseilles, 40 cks. 119 brls.

Paraffin Scale—
New York, 1,013 brls. Anglo-Am. Oil Co.
Rangoon, 78 bgs.
Baltimore, 100 brls.

Phosphates—
Ghent, 200 t.

Plumbago—
Genoa, 300 bgs.

Potash—
Rouen, 60 cks.

Pyrites—
Huelva, 4,682 t. Matheson & Co.
,, 1,130 H. Bath & Son
Syra, 263 Geo. G. Blackwell, Sons & Co.

Rosin—
Brunswick, 2,563 brls.

Saltpetre—
Calcutta, 292 bgs. Ralli Brs.
Hamburg, 135 cks.

Soap—
Marseilles, 4 cs.
New York, 1 bx.
N. Orleans, 580 brls.
Leghorn, 25
Rotterdam, 2
S'dn'y, N.S.W. 987 cs. Lever Brs., Ld.

Soapstone—
Bordeaux, 180 bgs. Geo. G. Blackwell, Sons & Co.

Starch—
Antwerp, 10 cs. J. T. Fletcher & Co.
,, 278
Hamburg, 112 2 cks.

Stearine—
New York, 5 hds.
Antwerp, 13 bgs. J. T. Fletcher & Co.
Rotterdam, 7 bls.

Talc—
Genoa, 200 bgs.

Tallow—
Boston, 100 tcs.
Sydney, N.S.W. 1,610 cs. Lever Brs., Ld.

Tartaric Acid—
Hamburg, 8 cks.
Rotterdam, 14

Turpentine—
Brunswick, 926 brls.

Ultramarine—
Rotterdam, 40 cks.

Varnish—
New York, 11 brls. W. A. Warren
,, 4 Davies, Turner & Co.

White Lead—
Rotterdam, 54 cks. 6 brls.
Antwerp, 13 cks.

Wood Pulp—
Rotterdam, 152 bls.

Zinc Oxide—
Antwerp, 65 brls.
New York, 150

MANCHESTER.

Week ending October 15th.

Acetate of Lime—
New York, 827 bgs.
Rouen, 154

Ammonium Chloride—
Hamburg, 1 ck.

Ammonium Oxalate—
Hamburg, 1 ck.

Aniline Colours—
Hamburg, 24 cks.

Aniline Salts—
Rotterdam, 28 cks.

Antimony Salts—
Hamburg, 11 cks.

Asbestos—
Rotterdam, 2 bls.

Barium Chloride—
Rotterdam, 4 cks.

Barytes—
Antwerp, 155 bgs.
Hamburg, { 11 cks. 50 bgs.

Beta Naphthol—
Rotterdam, 1 brl.

Cement—
Antwerp, 1,796 bgs.
Stettin, 400 cks.

Chemicals (*otherwise undescribed*)
Rotterdam, 5 cks.

Colours—
Antwerp, 3 cks. 2 brls.
Rotterdam, { 8 bxs. 75 brls. 28 cks. 31 cs.
Rouen, 4

Dyestuffs (*otherwise undescribed*)
Antwerp, 1,422 bgs.

Extracts—
New York, 14 brls.

Farina—
Hamburg, 100 bgs.
Stettin, 1,050 Browne, Geveke, & Co.
,, 270

Glue—
Antwerp, 3 cks.
Hamburg, 40 bgs.
Rotterdam, { 11 5 cks. 7 cs.
Rouen, 22 57 bls.
Treport, 23 pks.

Indigo—
Rotterdam, 3 chts.

Limestone—
Antwerp, 5 cs.

Litharge—
Rotterdam, 22 cks. 36 pks.

Lithopone—
Hamburg, 24 cks.

Naphthaline—
Antwerp, 1 ck.

Oxalic Acid—
Hamburg, 14 cks.

Paraffin Scale—
New York, 905 bls.

Potash—
Hamburg, 24 cks. 20 dms.
Rotterdam, 5
Rouen, 1
Treport, 42 pks.

Salicylic Acid—
Hamburg, 1 cs.

Soap—
Hamburg, 1 cs.

Soda—
Treport, 40 bgs.

Sodium Bisulphite—
Hamburg, 4 dms.

Starch—
Antwerp, 282 cs.
Hamburg, 80
New York, 300 sks.
Rotterdam, 233

Stearine—
Antwerp, 5 bgs.
New York, 25 tcs.

Sulphur—
Hamburg, 1 ck.

Sulphuric Acid—
Rotterdam, 10 cks.

Tallow—
New York, 100 tcs. 100 hds.

Tannic Acid—
Hamburg, 3 cks.

Tannin—
Hamburg, 4 cks.

Tartar Emetic—
Hamburg, 4 cks.

White Lead—
Antwerp, 8 cks.

Wood Pulp—
Gothenburg, 770 bls.
New York, 1,800 bdls.
Rotterdam, 17
Stettin, 200
Stockholm, 2,400 W. H. Stott &

Zinc Oxide—
Antwerp, 10 cks.
Hamburg, 25

Zinc White—
Rotterdam, 70 cks.

HULL.

Week ending October 15th.

Acetic Acid—
Rotterdam, 5 blns. Hull & Netherlands S. S. Co.
1 brl.

Alum—
Hamburg, 16 cks. Wilson Sons, & Co., Ld

Asbestos—
New York, 2 brls. Wilson Sons, & Co., Ld.

Barytes—
Antwerp, 103 cks. Wilson,
50 bgs. Sons, & Co., Ld.
Bremen, 50 Veltmann & Co.
,, 42 cks. A. Sanderson & Co.
,, 23

Chemicals (*otherwise undescribed*)
Antwerp, 57 pks. Wilson Sons, & Co., Ld.
Bremen, 63 cks.
Dunkirk, 40 dms. Wilson,
16 pks. Sons, & Co., Ld.
Hamburg, 8 cks.
Rotterdam, 4 Hull & Netherlands S. S. Co.

Colours—
Antwerp, 4 cks. Bailey & Leetham, Ld.
,, 10 pks Wilson, Sons, & Co., Ld.
Danzig, 3 kgs.
Rotterdam, { 10 bxs. 28 cks. 30 pks. Hull & Netherlands S. S. Co.

Dyestuffs—
Alizarine
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Aniline Colours
Antwerp, 2 cks Bailey & Leetham, Ld.
Valonia
Smyrna, { 434 t. 280 bgs.

Dyestuffs (*otherwise undescribed*)
New York 10 bgs.

Glucose—
Hamburg, 99 cks. Wilson, Sons, & Co., Ld.
New York, 750 brls.
Stettin, 100 bgs. ,,

Glue—
Dunkirk, 12 bls. Wilson, Sons, & Co., Ld.
Hamburg, 40 bgs, ,,

Kaolin—
Rotterdam, 238 bgs. Hull & Netherlands S. S. Co.

Linseed Oil—
Amsterdam, 3 brls. Hull & Netherlands S. S. Co.

Lithopone—
Hamburg, 8 cks. Wilson, Sons, & Co., Ld.

Nickel Salts—
Rotterdam, ck. Hull & Netherlands S. S. Co.

Ochre—
Rotterdam, 11 cks. Hull & Netherlands S. S. Co.

Plumbago—
Hamburg, 2 cks. Wilson, Sons, & Co., Ld

Saltpetre—
Antwerp, 185 bgs Wilson, Sons, & Co., Ld.
Hamburg, 4 cks. ,,

Soap—
New York, 538 pks.

Starch—
Amsterdam, 50 bgs. Hull & Netherlands S. S. Co.
Antwerp, 3
Bremen, 258 cs. Veltmann & Co.
Ghent, 341 Wilson, Sons, & Co., Ld.
Rotterdam, 32 Hull & Netherlands S. S. Co

Tallow—
Boston, 300 tcs Wilson, Sons, & Co , Ld.
Dunkirk, 239 cks. ,,
Hamburg, 17 tcs. ,,

Tar—
Stockholm, 66 brls. Wilson, Sons & Co., Ld.
Uleaborg, 1,500

Tartaric Acid—
Rotterdam, 2 brls. Hull & Netherlands S. S. Co.
11 cks

Ultramarine—
Bremen, 12 cks.
Rotterdam, 3 Hull & Netherlands S. S. Co

Varnish—
Antwerp, 5 cks. T. F. Chambers & Co.
Rotterdam, 8 Hull & Netherlands S. S. Co.

White Lead—
Antwerp, 37 cks. Bailey & Leetham Ld.
Ghent, 35 Wilson, Sons. & Co., Ld.
Rotterdam, 32 Hull & Netherlands S. S. Co.

Wood Pulp—
Antwerp, 1 ble. Wilson, Sons, & Co., Ld.
Christiania, 1 882 ,,
Drontheim, 560 ,,
Gothenburg, 90 ,,

Zinc White—
Rotterdam, 53 cks. Hull & Netherlands S. S Co.

GLASGOW.

Week ending October 20th.

Alumina Sulphate—
Rotterdam, 30 cks. J. Rankine & Son

Asbestos—
New York, 460 bgs.
Genoa, 93 pks.

Barium Chloride—
Rotterdam 4 cks. J. Rankine & Son

Barium Sulphate—
Antwerp, 500 bgs.

Barytes—
Rotterdam, 30 pks. J. Rankine & Son

Bleaching Powder—
Rotterdam, 80 cs. J. Rankine & Son

Boracic Acid—
Leghorn, 5 cks.

Castor Oil—
Leghorn, 5 cs.
Antwerp, 27 cks.
Marseilles, 228 brls.

Chalk—
Leghorn, 7 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 13 cks.

Colours—
Rotterdam, 6 cks. 1 cs. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 34 brls. J. Rankine & Son
Aniline
Rotterdam, 27 brls. J. Rankine & Son
Madder
Rotterdam, 2 cks. J. Rankine & Son

Glucose—
Montreal, 25 brls.

Glue—
Antwerp, 2 cks.

Lead Acetate—
Rotterdam, 18 cks. J. Rankine & Son

Mineral White—
Genoa, 100 bgs.

Molasses—
New York, 450 brls.

Ochre—
Marseilles 94 cks.
N'port News, 228 brls.
Rotterdam, 4 cks. J. Rankine & Son

Plumbago—
Genoa, 197 bgs.

Potash—
Rotterdam, 44 cks. J. Rankine & Son

Potassium Nitrate—
Hamburg, 50 cks.

Pumice Stone—
Leghorn, 20 bgs. 5 cs.

Soap—
Baltimore, 100 brls.
Marseilles, 3 cs.

Soap Lye—
Marseilles, 40 cks.

Soap Stock—
New York, 230 brls.

Soda—
Genoa, 56 brls.

Starch—
Rotterdam, 13 cs. J. Rankine & Son
Baltimore, 210 bgs.
Antwerp, 4 cs.

Stearine—
Amsterdam, 154 bgs.

Tallow—
New York, 75 tcs.

Tartar—
Bordeaux, 16 cks.

Ultramarine—
Antwerp, 10 cs.

Varnish—
New York, 5 brls.

Waste Salt—
Hamburg, { 257 cks. 500 bgs.

White Lead—
Rotterdam, 84 pks. J. Rankine & Son

Wood Pulp—
Montreal, 5,251 bdls.
Christiania, 2,300 bls.
Drammen, 1,168 5 cs.

Zinc Oxide—
Antwerp, 12 cks.

Zinc White—
Genoa, 30 cks.

TYNE.

Week ending October 15th.

Antimony—
Hamburg, 100 cs. Tyne S. S. Co.

Antimony Ore—
Tampico, 1,341 sks.

Barytes—
Rotterdam, 160 bgs. Tyne S. S. Co.

Castor Oil—
Antwerp, 30 brls. Tyne S. S. Co.

Colours—
Antwerp, 5 brls. Tyne S. S. Co

Glue—
Hamburg, 80 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 11 orts. Tyne S. S. Co.

Magnesia—
Bergen, 3 cs.

Paint—
Christiania, 2 cs. P. H. Matthiessen & Co

Pyrites—
Huelva, 3,135 t. Tharsis Sulphur & Copper Co.

Soap—
Rotterdam, 2 cs. Tyne S. S. Co

Starch—
Rotterdam, 30 cs. Tyne S. S. Co.

Tartaric Acid—
Rotterdam, 20 cks. Tyne S. S. Co.

Wood Pulp—
Christiania, 750 bls. P. H. Matthiessen & Co.

Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.

GOOLE.

Week ending October 12th.

Alizarine—
Rotterdam, 120 cks. 6 cs.

Alkali—
Calais, 22 cks.

Barytes—
Hamburg, 100 bgs.
Rotterdam, 5 cks.

Bog Ore—
Delfszyhl, 115 t.

Chemicals *(otherwise undescribed)*
Hamburg, 5 cs.

Colours—
Hamburg, 28 cks. 4 cs.

Dyestuffs *(otherwise undescribed)*
Amsterdam, 6 cks. 1 cs.
Antwerp, 350 bgs.
Boulogne, 16 cks 2
Rotterdam, 518 104

Farina—
Delfszyhl, 40 bgs.

Glue—
Boulogne, 1 ble.

Phosphates—
Ghent, 800 bgs

Potash—
Calais, 55 dms
Rotterdam, 15 cks

Potassium Sulphate—
Dunkirk, 17 cks. 15 dms.

Pyrites—
Borneo, 1,150 t.
Huelva, 800

Saltpetre—
Hamburg, 11 cks.

Soda—
Rotterdam, 18 cks

Starch—
Ghent, 86 bxs.

Tartaric Acid—
Rotterdam qty.

Waste Salt—
Hamburg, 992 cks.

GRIMSBY.

Week ending October 15th.

Albumen—
Dieppe, 10 cs.
Hamburg, 10 cks.

Barytes—
Rotterdam. 150 bgs.

Caoutchouc—
Antwerp, 2 cs.
Hamburg, 2

Chemicals *(otherwise unascribed)*
Hamburg, 31 cs.
Rotterdam, 35 cks. 13 pks

Colours—
Antwerp, 7 cks. 13 pks.
Dieppe, 1
Hamburg, 93 11 cs. 69
Rotterdam, 4

Dyestuffs *(otherwise unascribed)*
Antwerp, 217 bgs

Farina—
Hamburg, 100 bgs.

Starch—
Antwerp, 113 cs.

Zinc Ashes—
Rotterdam, 10 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending October 19th.

Acids—
Colombo, 4 cs. £24
Durban, 20 43

Alkali—
Lyttelton, 12 cks. 1 kg. £48

Alum—
Calcutta, 41 t. 1 c. £150

Ammonia—
Bombay, 14 cs. £58
Durban, 10 15
,, 16 22
Hiogo, 2 t. 47
New York, 6 c. 11
Rangoon, 4 21

Ammonium Carbonate—
St. Petersburg, 1 t. 5 c. £32
Bremen, 5 brls. 14
New York, 25 kgs. 170

Ammonium Chloride—
Adelaide, 1 t. £19
Sydney, 2 2 c. 73
Genoa, 1 20

Ammonium Sulphate—
Hamburg, 30 t. £300
Jersey, 25 262
Rouen, 60 3 c. 575
Rotterdam, 7 16 74
Yokohama, 50 1 520
Marseilles, 25 12 250
Dunkirk, 150 1,463

Arsenic—
St. Petersburg, 15 t. £282
Rotterdam, 10 dms. 13

Borax—
Sydney, 170 kgs. £119

Carbon Bisulphide—
N. Orleans, 10 dms. £50

Carbonic Acid Gas—
Channel Is., 45 tubes £17

Caustic Potash—
Constantinople, 1 t. 2 c. £31

Caustic Soda—
Lyttelton, 51 t. 9 c. £40
Melbourne, 1 1 24
Philadelphia, 67 400
Wellington, 1 13 5
Adelaide, 18 15
Wanganui, 5 11

Chemicals *(otherwise undescribed)*
Brisbane, 9 pks. £45
Sydney, 9 kgs. 17 91
Adelaide, 13 cs. 61 (pt.) 157
Bordeaux, 8 pks. 14
Madras, 10 19
Auckland, 10 41
B. Ayres, 12 37 176
Melbourne, 16 170
Boulogne, 1 ck. 2 14
Havre, 5 19 74
E. London, 4 15
Bombay, 6 17 12 98
Hamburg, 12 kgs. 70
Durban, 10 18 93
New York, 10 10
Cape Town, 5 63
Demerara, 50 clys. 11
Montreal, 17 47
Perth, 4(pt.) 12 (pt.) 31
St. John, N.B., 8 18
Halifax, 15 cks. 100
Lisbon 4 cs. 57
Newcastle, 2 kgs. 12
Bangkok, 6 31
Formosa, 7 dms. 14

Citric Acid—
Oporto, 3 cks. £10
St. Petersburg, 5 10 kgs. 410
Odessa, 8 30
Delagoa Bay, 1 cs. 3

,	5	1	39
o,		6 c.	30
ne,		11	65
Town,		1	7

roducts—
arine

ton,	3 cks.		£38
tersburg,		12 cs.	560
rp,	5		67
,	20		292

line

nd,		1 cs.	£16
ama,			4 dms. 18

zol

ne,	88 cks.	50 brls.	£369

bolic Acid

izabeth,		50 dms.	£43
,		25	73
y,		6 cs.	16

osote

York,	1,000 cks.		£680
aux,	100		73

osote Oil

ad,	100 cks.		£30

osote Salts

elphia,	1,398 bgs		£393

a

gne,	14 cks.		£96
,	7		187

ntha

urne,	5 crts	20 dms.	£29
rt,		28 brls.	£ 00

phthaline

dam,		10 cs.	£10

ih

rp,	1,769 t.		£7,079
adria,		250 brls.	61
,	300		322
rk,	110		154
hai,		40	20
,	150 cks.		83
,	qty.		640
Kong,		1, 97 cs.	546
urg,		1	8
dam,		100 bls.	235
on,	10 cks.		7

ldine

y,		5 cs.	£15
o,		200 brls.	£110
n,		50 dms.	8
ulu,		50	15
ay,	25 mlts.		18
,		100	44
urg,		218	97
dam,		15	33
y,		5	5
urne,	10		31

Sulphate—

rn,	5 t.	9 c.	£85
rt,	16	4	270

of Tartar—

ne,	2 t.	16 c.	5 cs.	£200
arne,	2	10		187
n,		3		12

ctants—

urg,	25 cks.		£125
in,		5 cs.	8
church,		3	5
rt,	25		31
n,		233 pks.	123
y,		9 150	203
urne,		10	26
zabeth,		4	20
dam,		4	13
de,		2	10
	6		21

ine—

urg,	19 t.	8 c.	£470
al,	4	18	215

e—

meau,	130 t.		£940
	300	2 c.	730
	421	12	1,438
nd,	51		210
ux,	54		230
,	15		60
o,	85		407
x,	112		343
ara,	80	11	740
oupe,	535		1,350
t,	95		240
,	523		4,184
ersburg,	10		32
	47	6	125
town,	1,485		5,550

Acid—

nd Bay,	3 t.	3 c.	£45

Acid—

dam,		8 c.	£1,
e,	3 cks.		3,

ish—

rne,	1 t.	6 c.	£19
de,		7	6

Phosphorus—

Wellington		4 c.	£30

Potash Salts—

Auckland,	13 t.	6 c.	£1,100

Potassium Chlorate—

New York,		4 c.	£8

Potassium Cyanide—

Fremantle,	6 t.		£669
Brisbane,	1		103
Madras,		10 c.	40
Sydney,	2	4	543
Adelaide,	2	5,000 bgs.	1,600
Durban,		7	719
Singapore,		1 cs.	13
Melbourne,		80	918
Los Angeles,		100	539
Tampico,		100	586
Sarawak,		20 cks.	203

Potassium Nitrate—

Brisbane,		10 c.	£14

Prussian Blue—

Rotterdam,	4 cks.		£10

Saltpetre—

Brisbane,	2 t.	10 c.	£50
Madeira,		16	20
Antwerp,	1		21

Sheep Dip—

Karachi,			50 dms.	£11
Napier,		200 cs.		350
Gisborne.		75		131
Delagoa Bay,		4 c.		11
Lyttelton,		4 brls.	70	103
E. London,	1 t.	15 c.		45
B. Ayres,	29	12	1,700 cs.	4,409
M. Video,	5	10		85

Soap Lye—

Hamburg,	13 t.	13 c.	£273

Soda—

Genoa,	3 t.		£19
Montreal,		1 c.	6

Soda Crystals—

E. London,	2 t.	6 c.	£8

Sodium Bicarbonate—

Normanton,	1 t.	2 c.	£7
Singapore,		3	6
New York,	1	10	11

Sodium Prussiate—

Rotterdam,	5 t.		£229

Sodium Sulphate—

Ghent,	70 t.		£105
Rotterdam,	100		137

Sulphur—

Antwerp,	2 t.	1 c.	£14
Adelaide	10		64

Sulphuric Acid—

Durban,		10 cs.	£18
Demerara,	11 t.	13 c.	75

Superphosphates –

Auckland,	90 t		£270
Colombo,	15	1 c.	55

Tartaric Acid –

Thursday I.,		2 c.	£17
Auckland,	2 kgs.		12
Brisbane,	1 t.		112

LIVERPOOL.

Week ending October 19th.

Acetic Acid –

Barcelona,	1 t.	18 c.	£40

Alkali—

Oporto,	31 t.			£127
Piræus,	19	10 c.		80
Bilbao,	6	6		25
Barcelona,	7	15		30
Valencia,	54	6		220
Brisbane,	4	19	2 q.	31
Boston,	22	11		139

Alum—

Alexandria,	1 t.			£5
Genoa,	6	10 c.		33
Brisbane,	1			7
Smyrna,	7	1	1 q.	37
Cape Town,	3		3	20
Pernambuco,	5	3		35
Gibraltar,	1	5	1	6
Bourgas,	4	6	3	20
Madras,	5	1	3	28
Melbourne,	9	19	3	50
Samsoun,	9	6		43

Aluminous Cake—

Bombay,	5 t.	11 c.	1 q	£15

Ammonium Carbonate—

Vigo,		12 c.	2 q	£17
Melbourne,		4	3	6
Genoa,		10		14
Hamburg,	2 t.	10		82
Copenhagen,	3	10		98

Ammonium Chloride—

Gijon,		10 c.	3 q.	£19
Fiume,	5 cks.			42
Alexandretta,	1 t.	5		47
Tampico,		5	2	6
Calcutta,		5	2	11
Smyrna,	1	10	1	45
Ibrail,		18	3	28
Genoa,		10		16
Leghorn,	1	4		37
Trieste,	3			96

Ammonium Sulphate—

Lisbon,	19 t.	12 c.	1 q	£183
Demerara,	208	6	2	2,020
Naples.	2			20
Las Palmas,	48	8		490
Genoa,	25			240
Philadelphia,	20	8		259
Gandea,	50	6	1	484
Valencia,	101			991
Malaga,	49	10		489
Tarragona,	5			48
Bordeaux,	5			48

Antimony Sulphide—

New York,		9 c.	£25

Arsenic—

Maranham,	1 t.	1 c.	3 q.	£21

Basic Slag—

Cape Town,	100 t.		£150

Bleaching Powder—

Baltimore,	161 cks.		
Bombay,		100 cs.	
Boston,	248		
Calamata,	10		
Calcutta,		110	
Gambrai,	18		
Genoa,	184		
Havana,		20 brls.	
Leghorn,	3	7	
Lisbon,	20		
London,	5		
Milwaukee,	89		
Montreal,	40		42 pks.
Newport News,	98		
New York,	799	45	
Oporto,	30		
Philadelphia,	46		226 sks.
Rouen,	10		
San Francisco,		103	
Vigo,		12	

Boracic Acid—

Montreal,	5 t.	9 c.		£134
Rotterdam,		15		20
Copenhagen,		2		3
Habana,	1			30

Borax—

Montreal,	16 t.	19 c.		£220
Genoa,	2			23
Brisbane,	4	1	2 q.	61
Rotterdam,	16	3	3	228
E. London,	3			38
Ancona,	1			14
Boksburg,	2			28
New York,		10 cs		30
Vera Cruz,	1	10 c.		92
Toronto,	12	15		191
Stettin,	3 cks.			24
Halifax,	2 t.	6	1	31
Mexico City,		19		13
Galatz,	1			14
Santiago,		3	1	2
Gibraltar,		5		3
Sydney,	1	10		21
Valparaiso,		4		6
Copenhagen,	5			75
Christiania,	1	2		16
Melbourne,	2	10		35

Calcium Carbide—

Maranham,		1 c.	1 q.	£8
Sydney,		18		28

Calcium Chloride—

Genoa,	21 t.	13 c.		£49
Boston.	30	1		58

Carbolic Acid—

Baltimore,		10 c.		£16
Montreal,		13	2 q.	8
Hamburg,	16 t.	2		995
Bombay,		6		13
Rouen,	13	14	1	135
New York,	15 cks.			120

Caustic Potash—

Rotterdam,	5 t.	3 c.	£159
Vancouver,		10	14

Caustic Soda—

Adelaide,	60 dms.	10 cs.	
Alexandria,	20		
Amsterdam,	10		
Ancona,	18		
Antwerp,	110		
Arica,	15		
Bahia,	10		
Barcelona,	110	90 cks.	
Bari,	56		
Bilbao,	218		
Bordeaux,	53		
Brisbane,	60		
Calcutta,	88		
Cartagena, N.G.	20		
Catania,	10		
Cavalla,	256		
Charlotte T'wn,	100		
Christiania,	10	5 brls.	
Colombo,		4 cks.	
Copenhagen,	35		
Corunna		20	
Delagoa Bay,	30		
Fiume,	30		
Galatz,	268		
Genoa,	262		
Gutujewski,	20		
Hamburg,	14		
Havana,	90		
Ibrail,	250		
Konigsberg,	35		
La Guayra,	90		
Leghorn,	70		
Malaga,	141	8 brls.	
Maranham,	10		
Marseilles,	120		
Melbourne,	50		20 pks.
Messina,	65		
Montreal,	200		
Nantes,	60		
Naples,	65		
Newcastle,	70		
N. Orleans.	100		
New York,	50	100	25 cs.
Oporto,	15		
Para,	18		
Philadelphia,	50		
Puerto Cabella,	16		
Riga,	69		
Rotterdam,	102	18	
Rouen,	76		
Santos.	20		
Savanilla.	5		
Seville,	100	32	
Stettin,	403		
Tampico,	100		
Tripoli,	30		
Vigo		10	
Wellington,	10		

Chemicals *(otherwise undescribed)*

Genoa,	2 t.	10 cs.		£73
		17 brls.		
Natal.	25 kgs.			18
Barcelona,	12	55		115
Melbourne,	8 t.	10 c.		1 9
Rosario.	26	2		154
Cape Town,		5		4
Havana,	11	10		40
Piræus,	2	13		60
Salonica,	1	1		38
Yokohama,	6			168
Madras,	3	7		325
Philadelphia,	13	5		360
Stettin,	10			130
Vera Cruz,		4		8
Sydney.	10	2		22
Rotterdam,	23	9	1 q.	94
Portland,	50 bgs.			

China Clay—

Baltimore,	1,049 cks.		
Bombay,	390		
Boston.	2,324		
Maranham,	30		
Montreal,	1,313		
Newport News,	30		
Rio de Janeiro,	40		
Toronto,	30		

Citric Acid—

Vigo,		1 c.	£7

Coal Products—
Aniline Oil

Valleyfield,	2 cks.		4 dms.

Creosote

Bordeaux.	130 cks.		

Creosote Oil

B. Ayres,			500 dms.
San Francisco,	500 cks.		

Dyes

Chicago,	3 cks.		

Naphtha

Melbourne,			50 dms.
Sydney,			200

Pitch

Bilbao,		56 brls.	
Antwerp,	78 t.		
Calcutta,			20 dms.

Tar

Charlotte Town.		10 brls.	
Delagoa Bay,			150 dms.
Ibrail,		50	
Quebec,		6 cks.	

Copperas –

Quebec,	1 t.	8 c.	3 q.	£3
San Francisco	16	19	1	33

Copper Sulphate—
Catania, 10 . 1 c. 2 q. £178
Genoa, 5 4
Sourabaya, 2 19 48
Samarang, 5 17 3 96
Batavia, 2 19 48
Colombo, 2 10 41
Callao, 1 7 22
Palermo, 6 19 113
Bourgas, 1 17
Quebec, 15 2 12
La Pallice, 19 3 16
Sydney, 1 17
Nantes, 4 18 2 86

Dried Blood—
Las Palmas, 5 t. £43
Mauritius, 50 433

Dyestuffs—
Alizarine
Samsoun, 10 kgs.
Aniline Colours
Lisbon, 3 kgs.
New York, 15 cks.
Extracts
Barcelona, 10 cks.
Boston, 125
Montreal, 6
Logwood
Alexandria, 100 bgs.

Dyestuffs (*otherwise undescribed*)
Eureka, 20 bgs.

Glycerine—
Nagasaki, 1 t. £60
Yokohama, 1 10 c. 90
Montreal, 8 366
Leghorn, 1 44
Valparaiso, 8 24
Shanghai 1 51
Antwerp, 10 8

Guano—
Malaga, 29 t. 14 c. £201

Iron Oxide—
Montreal, 34 t. 2 c. 3 q. £247

Magnesia—
Rosario, 4 cs.
Tampico, 4

Magnesium Sulphate—
Montreal, 50 brls.

Manure—
Bordeaux, 35 t. 9 c. £58
Santa Cruz de Teneriffe, { 5 10 52

Paint—
Alexandria, 370 kgs. 6 dms.
Baltimore, 2 cs.
Bilbao, 22
Bolivia, 15
B. Ayres, { 222 2 81 / 62 cks.
Calcutta, 75
Callao 3 9
Cape Town, 12
Colombo, 7
Colon, 4
Curacao, 30 kgs.
Gibraltar, 7 pks.
Hamburg, { 33 / 1 ck.
Havana, 1
Hong Hong, 38 dms
Malta, 20
Nagasaki, 20 kgs.
New York, 21 cks.
Piræus, 2
Rangoon, 6
Rio de Janeiro, 8
St. John's, { 30 19 / 360 kgs.
Santander, 24
San Thome, 10
Sulina, 4 cks.
Talcahuano, 11

Painters' Colours—
Calcutta, 66 brls. 22 cs.
Cape Hayti, 10 cks.
Corfu, 4
Delagoa Bay, 15
Maranham, 7
New York, 238 1
Para, 47 35 pks.
Vera Cruz, 100 kgs.

Paraffin Wax—
Genoa, 79 bgs.
Leghorn, 242
Patras, 15 cs.
Rouen, 10

Phosphates—
Nantes, 30 t. 19 c. £125

Phosphorus (Amorph.)—
Kobe, 5 t. 10 c. £1,040

Picric Acid—
New York, 1 t. 3 c. £120

Potash—
Buena Ventura, 4 c. 2 q. £5
Calcutta, 2 6
M. Video, 1 t. 6 3 36

Potashes—
Genoa, 4 t. 7 c. 2 q. £95

Potassium Bicarbonate—
New York, 10 c. 3 q. £15
Tampico, 9 1 14

Potassium Bichromate—
Alexandria, 2 brls. £7
Larnaca, 14 c. 22
Marseilles, 1 t. 9 1 q. 45
Vera Cruz, 8 2 18

Potassium Chlorate—
Danzig, 2 t. 10 c. £66
Gutujewski, 12 1 375
Hamburg, 4 6 122
Hiogo, 21 10 729
Libau, 10 308
New York, 5 154
Philadelphia, 7 10 240
Rotterdam, 1 30
Santos, 9 15
Shanghai, 7 211
Yokohama, 2 10 71

Potassium Cyanide—
Melbourne, 19 c. 3 q. £95

Potassium Iodide—
St. Thomas, 1 q. £12

Potassium Prussiate—
Genoa, 6 cks. £71

Rosin Oil—
Antwerp, 50 brls.
Oporto, 6

Salt—
Adjuah, 9 t.
Amsterdam, 100
Antwerp, 140 qty.
Axim, 5 14 c.
Baltimore, 745
Bandholm, 170 1
Barbadoes, 25
Bombay, 1 1
Boston, 400
Brisbane, 55
B. Ayres, 7 3
Calcutta, 1,176
C. C. Castle, 22 6
Charlotte Town, 50
Chicago, 260
Christiania, 14 8 250 cs.
Conakry, 19 13
Dunedin, 40
Ewanga, 40 3
Ghent, 250
Gothenburg, 1
Gd. Bassa, 11 1
Gd. Bassam, 67 12
Halifax, 150
Lagos, 20 1
Malta, 15
Melbourne, 460
M. Video, 100
Montreal, 800
Mossel Bay, 25
Newcastle, N.S.W., 180
N. Orleans, 500
New York, 253
Old Calabar, 52 4
Opobo, 20
Para, 31 5
Philadelphia, 230
Porto Novo, 50
Rangoon, 25
Rio de Janeiro, 5 14
Rotterdam, 300
San Francisco, 25
Sao Luz de Cauris, 59 19
Savannah, 475
Seydisfjord, 38
Sierra Leone, 50
Sundswall, 131 5
Sydney, 281 5 50 pks.
Valparaiso, 100

Salt Cake—
Bombay, 1 t. 19 c. £5
Lisbon, 40 3 74
Norrkoping, 293 6 3 q. 367
Philadelphia, 25 42

Saltpetre—
Maranham, 2 t. 10 c. £57
P. E. Island, 6 6

Sheep Dip—
B. Ayres, 43 t. 12 c. 3 q. £1530
M. Video, 11 7 2 185
Punta Arenas, 2 11 100

Soap—
Aachen, 30 cs.
Adjuah, 50 bxs.
Akassa, 22
Alexandria, 40 20
Algoa Bay, 330
Antofagasta, 2
Axim, 200
Belize, 585
Bermuda, 3
Bieune, 10
Bluefields, 100
Bombay, 1,231 19 9 pks.
Boston, 25 cks.
Brussels, 1,800
Brutu, 84
Calcutta, 25 625 bdls.
C. C. Castle, 200
Cape Town, 210 77
Christiania, 100
Colombo, 5
Conakry, 50
Curacao, 290
Delagoa Bay, 738
Demerara, 3 052
Dixcove, 50
E. London, 3,470 50
Genoa, 110
George Town, 450
Ghent, 200
Gibraltar, 263
Gd. Canary, 60
Halifax, 300
Hamburg, 10 2
Hango, 37
Harbour Grace, 20
Hong Kong, 15
Johannesburg, 50
Lome, 50
Madras, 10 pks.
Malta, 30
Monrovia, 31
Montreal, 640
New York, 124
Osaka, 3
Ottawa, 400
Para, 1
Piræus, 26
Pt. Natal, 4,900
Pretoria, 20
Rangoon, 855
Rotterdam, 748
St. Antonio do Zaix, 40
St. John, 300
St. John's, 352
St Lucia, 50
Salonica, 150
Salt Pond, 200
Singapore, 3,978
Smyrna, 1
Syra, 108
Teneriffe, 820
Toronto, 2,000
Trinidad, 1,100
Winnipeg, 350

Soap Lye—
New York 160 dms.
Rotterdam, 80

Soda Ash—
Antwerp, 450 bgs.
Boston, 200 35 cks.
Calcutta, 6
Canea, 200
Christiania, 230
Copenhagen, 350
Fairwater, 200
Genoa, 100 36
Gothenburg, 420 95
Helsingfors, 10
Konigsberg, 200
Laurvig, 110
Lisbon, 21
Maranham, 180 brls. 10
M. Video, 5
Montreal, 220 54 tcs.
New York, 13 pks. 43
Oporto, 9 brls. 18
Palermo, 25
Philadelphia, 840 58 tcs.
Rio de Janeiro, 50 brls. 140
Rotterdam, 19
St. Stephen's, 80
Smyrna, 370
Turin, 100
Venice, 200

Soda Crystals—
Boston, 280 brls.
Calcutta, 33 cks.
Charlotte Town, 100
Constantinople, 60
Halifax, 100
Havana, 5
Malta, 50
Montreal, { 25 kgs. 250 pks. / 340
New York 125 280 cks.
Philadelphia, 140
Piræus, 50
Pt. Natal, 70
St. John's, 25 bgs. 65

Sodium Bicarbonate—
Aalborg, 7 pks.
Antwerp, 20 kgs.
Barbadoes, 7 cks.
Cadiz, 7
Calcutta, 1,300 6
Cape Town, 20
Charlotte Town, 200 dms
Christiania, 20
Cochin, 10
Colombo, 8 pks
Constantinople, 22
Galatz, 70
Genoa, 25 10 cks.
Gijon, 11
Gothenburg, 20
Hamilton, 70 20
Havana, 25
Kurrachee, 20
La Libertad, 40
London, 140
Messina, 6
Monterey, 2
M. Video, 14
Montreal, 300 bgs. 2
Oporto, 40 kgs.
Rosario, 50
Rotterdam, 50 4 brls.
Stettin, 2 c 1 pk
Vigo, 10

Sodium Carbonate—
Chicago, 60 brls

Sodium Chlorate—
Gutujewski, 750 kgs.
Hamburg, 4 brls.
Lisbon,
Rouen,

Sodium Hyposulphite—
Portland 110 kgs.

Sodium Oxide—
St. Petersburg, 10 cs.

Sodium Silicate—
Nantes, 15 dms

Sodium Tartrate—
Tampico, 2 brls.

Starch—
Gothenburg, 25 bgs
Pernambuco, 5

Sulphur—
Gothenburg, 145 t.
Natal, 12 12 c.

Sulphuric Acid—
Singapore, 1 t. 1 c.
Sydney, 10 1

Superphosphates—
Arucas, 10 t.
Valencia, 220 2 c. 4

Tartaric Acid—
Habana, 15 c. 3 q.

Varnish—
Antwerp, 16 cks.
Bombay, 5 cs.
B. Ayres, 11
Havana, 1
Montreal, 4

Zinc Chloride—
Bombay, 29 t.

MANCHESTER.

Week ending October 19th.

Alumina Acetate—
France, 2 cks.

Aniline Colours—
Germany, 3 kgs.

Bleaching Powder—
Montreal, 41 cks.

Bones—
Beauvais, 161 bgs.

Caustic Soda—
Bahia, 10 dms.
Maracaibo, 20

Chemicals (*otherwise undescribed*)
Montreal, 72 tcs.

Coal Products—
Aniline Oil
Belgium, 8 pks.
Beta Naphthol
Belgium, 2 brls.
Naphtha
Paris, 31 cks.
Naphthylamine
Switzerland, 28 cks.
Paranitraniline
Belgium, 2 kgs.
Pitch
Treport, 25 t.
Belgium, 5,020 c.

ll
5 dms.
30 dms.
s (*otherwise undescribed*)
8 cks.
13 cks.
ia, 25
109 sks.
y, 10 cks.
10
urg, 16
Bicarbonate—
s. 34 bgs.
Naphthionate—
y, 37 cks.

HULL.

ending October 15th.

tinople, 4 cks.
ium Sulphate—
ux, 185 bgs.
144
s—
rsburg, 4 cs.
ng Powder—
78 cks. 25 brls.
Soda—
100 pks.
als (*otherwise undescribed*)
3 cks.
lam, 85
343 slbs.
agen, 10 cs.
nia, { 15 1 371
5 pks.
tinople, 35 6
eim, 15
7
burg. 19 5
rg, 140
23
490 50
18
20
lam, 6
12 8
olm, 27
eed Oil—
dam, 300 c.
92
ux, 99
ntinople, 246
eim, 35
burg, 120
rg, 775
lles, 42
lam, 375
olm, 170
te—
ersburg, 120 cks.
5 brls.
burg, 3 bgs.
d Oil—
dam, 105 c.
rp, 48
8
ania, 370
eim, 36
rg, 52
e—
nagen, 1,524 bgs.
k, 4,426
d White—
ania, 12 bgs.
k, 100
ia—
lles, 40 cks.
1 ck.
rs' Colours—
24 cks.
rdam, 5 2 dms.
rp, 63 5 cs. 193
3 pks.
ntinople, 5
iania, 10
hagen, 2 2
nburg, 8 1
urg, 19
sberg, 8
illes, 16
York, 85
s, 7

Riga, 5 2
Rotterdam, 22
Rouen, 14
St. Petersburg, 2
Stettin, 9 3
Stockholm, 86 1
Stavanger, 2
Pitch—
Antwerp, 206 t.
Reval, 25 cks.
Plumbago—
Riga, 3 cks.
Soap—
Amsterdam, 25 cs.
Reval, 2
Rotterdam, 15
Starch—
Odessa, 400 cs.
Tallow—
Abo, 19 cks.
Odessa, 79
St. Petersburg, 151 brls.
Venice, 6
Tar—
Antwerp, 80 t.
Amsterdam, 3 cks.
Bremen, 13
Copenhagen, 36
Hamburg, 22 brls.
Reval, 100
Varnish—
Amsterdam, 2 cs.
Hamburg, 2 cks. 4
Stockholm, 1 4

GLASGOW.

Week ending October 20th.

Ammonium Sulphate—
Alicante, 50 t. 12¼ c.
Barcelona, 521 13½
Samarang, 25 13½
Trinidad, 55 7¾
Valencia, 539 5½
Asbestos—
Shanghai, £32
Boracic Acid—
Adelaide, £23 10s.
Hiogo, £25
Melbourne, 96
Borax—
Gothenburg, 2 t. 17 c.
Rotterdam, £35
Carbolic Acid—
Rotterdam, £200
Caustic Soda—
Barcelona, 4 t. 4 c.
Chemicals (*otherwise undescribed*)
Rotterdam, £14
Citric Acid—
Christiania, £15
Coal Products—
Creosote Oil
Boston, £70
Russia, 432
Pitch
Hamburg, 53 t. 14 c.
Tar
Canada, £52
Rangoon, 33
Extracts—
Canada, £626
Gothenburg, £25 12s.
Melbourne, £26
Glucose—
Pt. Elizabeth, 2 t. 17 c.
Linseed Oil—
B. Ayres, 4 t. ¼ c.
Hong Kong, 9 11¾
Pt. Elizabeth, 1 10
Singapore, 1 2¾
Townsville, 1 5¾
Litharge—
Christiania, £92
Montreal, 143
Logwood—
Canada, £121
Magnesium Sulphate—
Christiania, £31
Manure—
Valencia, 17 t. 5¾ c.
Paint—
Barbadoes, £41 10s.
B. Ayres, £113
Havana, £47 10s.
Natal, £318
Sandefjord, 25
Townsville, 71

Painters' Colours—
Boston, £205
Brisbane, 314
Hong Kong, 369
Pimental, 107
Shanghai, 21
Singapore, 64
Sydney, 254
Yokohama, 40
Paraffin Wax—
Barcelona, £499
Fiume, 45
Hiogo, 550
Pretoria, 309
Rotterdam, 25
Valencia, 22
Potassium Bichromate—
Antwerp, £49
Ghent, 37
Gothenburg, 70
Hiogo, 308
Montreal, 54
Norrkoping, 74
Rotterdam, 2 t. 8 c. 223
Toronto, 135
U.S.A., 851
Potassium Cyanide—
Melbourne, £918
Sydney, 91
Potassium Prussiate—
Barcelona, £155
Rosin Grease—
Transvaal, 9 t. 9¾ c.
Salt—
Saigon, 2 t. 10 c.
Sheep Dip—
B. Ayres, £135
Santa Cruz, 48
Useful Hill, Chili, 450
Soap—
Hong Kong, 1 t. 2 c.
Montreal, 2 7¾
Penang, 4 8¾
Singapore, 2 4
Sodium Bichromate—
Ghent, 3 t. 19 c.
Montreal, 2 5½
U.S.A., 8 4
Sulphuric Acid—
Rangoon, £100
Superphosphates—
Alicante, 24 t. 12½ c.
Penang, 25
Yarnish—
Moji, £286

TYNE.

Week ending October 15th.

Alkali—
Antwerp, 12 t. 1 c.
Bergen, 1 3
Rotterdam, 2 19
St. Petersburg, 55 16
Alum—
Seville, 1 t. 11 c.
Alum Waste—
Horsens, 11 t. 7 c.
Alumina Hydrate—
Antwerp, 5 t. 3 c.
Ammonium Carbonate—
Seville, 10 c.
St. Petersburg, 5 t.
Ammonium Chloride—
Seville, 5 c.
Ammonium Sulphate—
Barcelona, 50 t.
Antimony—
Montreal, 3 t.
St. Petersburg, 30
Barium Binoxide—
Dunkirk, 3 t. 5 c.
Hamburg, 5 8
Rotterdam, 7 11
Barium Carbonate—
St. Petersburg, 44 t. 15 c.
Bleaching Powder—
Antwerp, 37 t. 5 c.
Bergen, 5 2
Christiania, 56 14
Copenhagen, 20
Gefle, 65 7
Rotterdam, 14 17
Caustic Soda—
Antwerp, 19 t. 10 c.
Copenhagen, 7 5
Gefle, 4 18
Montreal, 24 11
Seville, 10 18
Stockholm, 4 18
Guano—
Dunkirk, 100 t.
Litharge—
Antwerp, 5 c.
Christiania, 5
Copenhagen, 11
Gefle, 16
Montreal, 2 t. 2
Odessa, 4 3
Stockholm, 10 7
Magnesia—
Barcelona, 3 t. 18 c.
Hamburg, 1
Montreal, 1 13
St. Petersburg, 7
Magnesium Sulphate—
Seville, 2 t. 2 c.
Manganese—
Antwerp, 7 cks.
Oxalic Acid—
Seville, 6 c.
Paint—
Antwerp, 2 c.
Soda—
Constantinople, 48 t. 11 c.
Rotterdam, 15 3
Stockholm, 16 5
Soda Ash—
Stockholm, 100 t. 12 c.
Sodium Nitrate—
Seville, 2 t. 4 c.
Sodium Silicate—
Antwerp, 1 t. 17 c.
Christiania, 2 11
Seville, 20 3
White Lead—
Copenhagen, 3 t. 3 c.
Montreal, 65 8
Odessa, 5 5
Witherite—
St. Petersburg, 10 t.
Zinc Ashes—
Rotterdam, 3 t. 7 c.

GOOLE.

Week ending October 12th.

Caoutchouc—
Boulogne. 18 cks.
Chemicals (*otherwise undescribed*)
Rotterdam, 24 cks.
Coal Products (*otherwise undes.*)—
Antwerp, 115 cks. 1 cs.
Boulogne, 55
Hamburg, 3
Rotterdam, 2
Dyestuffs (*otherwise undescribed*)
Ghent, 4 cks.
Hamburg, 8
Manure—
Dunkirk, 400 bgs.
Ghent, 189
Hamburg, 637
Painters' Colours—
Amsterdam, 2 cks.
Ghent, 2
Rotterdam, 3
Pitch—
Antwerp, 352 t.

GRIMSBY.

Week ending October 15th.

Alkali—
Rotterdam, 5 cs.
Ammonium Sulphate—
Rotterdam, 460 bgs.
Caoutchouc—
Esbjerg, 1 pk.
Chemicals (*otherwise undescribed*)
Dieppe, 3 cs.
Malmo, 11 cks. 10 kgs.
Coal Products (*otherwise undes.*)—
Dieppe, 83 cks. 2 kgs.
Hamburg, 25 brls. 3 cs.
Manure—
Esbjerg, 750 bgs.
Painters' Colours—
Antwerp, { 32 kgs. 1 ck. 1 cs. 5 pks.
Dieppe, 1
Hamburg, 3 2 57
Rotterdam, 1 kg. 1 brl.

PRICES CURRENT.

WEDNESDAY, Oct. 26, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9 & 8/3		
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/- & 33/-		
,, Nitrate .. .. per ton	31	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	9	7	6
,, ,, (grey) Hull .. .. ,,	9	8	9
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	4	17	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/- to 25/-		
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8½
,, 50/90 ,, ... ,,	0	0	8½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1½
Copper .. .. per ton	53	18	9
,, Sulphate .. .. ,,	17	10	0
,, Oxide (copper scales) .. .. ,,	46	0	0
Glycerine (crude) 80% .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	7	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	17	0	0
,, Carbonate (white lead) pure .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	5	0
,, ,, (grey) (ex ship) .. .. ,,	7	15	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	9
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	15	0
Linseed .. .. ,,	18	10	0
Stearine .. .. ,,	25	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. per ton	22	5	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	15	0
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz	0	2	3⅜
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. works.)	4 15 0		
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4 5 0		
,, ,, (Carb. Soda-ash) 48 % .. ,, ,,	4 0 0		
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,,	4 0 0		
,, ,, (Soda Crystals) .. .. .. ,, ,,	2 7 6		
,, Acetate (ex-ship) .. .. ,,	12	5	0
,, Arseniate, 45 % .. .. ,,	12	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. nett per ton	13	15	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7 15 0		
,, ,, (74 % Caustic Soda) ,, ,, ,,	7 10 0		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7 0 0		
,, ,, (60 % Caustic Soda) .. ,, ,,	6 0 0		
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3 15 0		
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate. 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	7½
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	4½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	0
,, ,, (Glauber's Salts .. .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	7	6
,, (Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	23	5	0
Tin Crystals .. .. per lb.	0	0	5¾
,, English Ingots .. .. per ton	84	10	0
Zinc (Spelter) .. .. ,,	23	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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AND

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Notices.

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ications for the Editor, if intended for insertion in the k's issue, should reach the office not later than **Tuesday** .

reports, and correspondence on all matters of interest to al and allied industries, home and foreign, are solicited. ents should condense their matter as much as possible, e side only of the paper, and in all cases give their names ses, not necessarily for publication. Sketches should be arate sheets.

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ertisements, Announcements in the Directory Columns, and all ts not prepaid, are charged at the Tariff Rates, which will be for- plication.

ments intended for insertion in the current week's issue h the office by **Thursday morning** at the latest.

CURRENT TOPICS.

EXIT THE WHITE LEAD CO.

AFTER nine years of constant endeavour, and an expenditure of close on £60,000., the White Lead Company have decided to abandon their mission as reformers and philanthropists, and dissolve themselves by the familiar method of voluntary liquidation.

Their object was good; their product was vastly improved as time progressed, until of late its quality was uniform and dependable; its claims as an innocuous substitute for the white lead of our forefathers were fostered by a fortuitous arousal of public opinion against lead poisoning, and afforded notoriety by Governmental inquiries; the appositeness of the occasion was turned to account by a general appeal to the Press for even wider publicity; and the whole-hearted services of an influential shareholder were opportunely enlisted in bringing this product before the notice of the leading railways, corporations, companies and public institutions; but to what purpose?—voluntary liquidation. In the opening months of 1893 we dealt with the new start the Company was then making, and designated their programme one of profitable philanthropy. We even went further, and ventured to doubt the possibility of combining the two "p's." The excellency of the object of the Company was incontrovertible, and we appreciated the fact, but contended all the same that as far as the profits were concerned the product must be such that, quality for quality, it could compete at a profit with ordinary white lead. Concerning the relative qualities little was then known.

Moreover, we even went so far as to assert that "The question of body is an important one, and *outweighs the other advantages of permanency and harmlessness.*" Five and a half years later, the directors, who in 1893 were so optimistic, acknowledge the inevitable by admitting in their valedictory report that "It appeared little or no importance was attached by any class of purchasers to innocuous properties, and that unless the company's products could be offered at prices incompatible with profit there was no immediate prospect of sufficiently increasing the business."

We are more sorry than pleased to find our fears thus confirmed, for undoubtedly the product has had much prejudice to contend against. Its use was a habit that required acquiring, and users were too indifferent to apply it in any other but the long-tried methods pursued with ordinary white lead. Consequently disappointment resulted, though as often as not the fault lay more with the user for his unreasoning inflexibility, than in the product.

The last ten years have certainly led to remarkable advances in white lead substitutes, and as the users become educated up to the changed order of things, which their successful employment entails, the commendable hopes and ambitions of the pioneers who are now retiring from the field may yet be realised.

But at the outset, apparently, these worthy gentlemen, like the simple little fly, "didn't know the ways of this wicked, wicked world," and had to learn that you cannot extend this process of education at a profit—at present.

LEGAL NOTES.

Three important cases have been settled in the Law Courts this week. The long fought dispute concerning the rights of Magnolia metal manufacture has practically been carried to finality, while the litigation between the Lagunas Nitrate Syndicate and the Nitrate Company of the same name, which has proved one of the most costly cases in the annals of the Courts, has, we think, touched its zenith, and will now gradually dwindle to more ordinary proportions as regards importance.

Both of these cases are sufficiently dealt with in our legal columns, but the third case, we think, calls for special mention, as it is likely to have a very direct bearing on the rights of riparian manufacturers who have to cope with the river pollution difficulty. A certain cotton mill impounded river water for use. The water contained solid matter which was not putrid, but became so by being impounded; and when once a week the lodge was run off, this putrid matter was discharged and the river polluted, for under the Rivers Pollution Act of 1876, no "putrid solid matter" might be discharged into any stream. The evidence showed that the discharge consisted of 97·6 per cent. of water, and 2·4 per cent. solid matter, and the Court decided that this effluent was not solid matter, whether putrid or not.

According to this decision, manufacturers who impound or divert water may turn an effluent into a stream which, chemically speaking, contains 2·4 per cent. of putrid solid matter, because, legally speaking, this solid matter is not solid matter. It will be instructive to see how the various river pollution Boards consider this decision, and what position they will take up regarding it. Leave to appeal was given.

GAS COMPANIES AND SELF-PROTECTION.

The advance of electric light in everyday use and the public estimation has not been without its effect on the gas industry, while municipalities have also made inroads upon the industry; but the advent and development of the Welsbach burner have certainly infused new life into many companies, and consequently an association has been formed to protect the interests of all those gas undertakings which have not been municipalised. All concerns which are gas companies, from the smallest to the largest, are welcome to join this association, and we should think such combination cannot fail to be beneficial to all—and the smaller companies in particular—especially in connection with Parliamentary business. We are pleased to see the proposal of an association has crystallised into an organisation.

Obituary.—We much regret to learn of the death of Mr. Charles Lowe, F.C.S., of Reddish, whose name is so widely and popularly associated with carbolic acid and its products, which took place at Coesfaen, Barmouth, on Tuesday, November 1st.

Fire at a Sanitary Ware Works.—On Tuesday morning at the premises of Messrs. J. Duckett and Son, Limited, Sanitary Ware Works, Burnley, an outbreak of fire occurred near the engine room. The fire brigade was speedily on the scene, but it was several hours before the flames were subdued. The pipe room was gutted and great damage done to brick machines, &c. The damage, estimated at £10,000, is covered by insurance.

An Advance in Cable Telegraphy.—General Greely, chief of the American signal service, in his annual report says that two Government officers—Professor Crehore and Lieutenant-Colonel Squier—have discovered a method of increasing the working power of submarine cables by the Sine wave system. In a recent experiment messages were sent and received over a line 1,110 miles long at a rate exceeding 3,000 words a minute. General Greely expresses the opinion that the discovery will revolutionise cable telegraphy.

SUGAR CANE CULTIVATION IN THE HAWAIIAN ISLANDS.

THE sugar industry of the islands prospered during the year 1897, all the plantations paying large dividends. Although the financial success of the sugar business is largely due to the treaty of reciprocity with the United States, there can be no doubt that a considerable measure of it is also due to the intelligent systems which have been adopted by the planting community, and to the introduction of improved methods of agriculture and manufacture. A few years ago the sugar planters of the islands formed themselves into an association, and

ESTABLISHED A LABORATORY

and experimental station from which much benefit has been derived. The director of this association makes periodical visits to the plantations, and prescribes such fertilisers as may be required, after a careful analysis of the soil has been made by the chemists of the association. The analyses of all fertilisers used by the planters have to be guaranteed by the manufacturers, and on their delivery they are sampled and analysed at the association laboratory at the expense of the manufacturers, who are not paid until their goods pass the tests made for the buyers. In this way fraud and careless manufacture are checked, and the planters are protected. At the experimental station of the association, sugar cane of different varieties is grown and tested, and various experiments of value are continually being made in fertilisers, irrigation and other matters connected with the successful raising of sugar cane.

The favourable weather of 1896, and the unusually large area of cane harvested, brought the 1896-97 crop to the highest point yet reached, namely 251,126 tons of 2,000 lbs. The 1897-98 crop will, probably, be under this, owing to the exceedingly dry weather last year.

After much experimenting it has been finally decided that the most effective machine for the

EXTRACTION OF THE JUICE

from the cane is the "nine-roll-mill," which is made up of three three-roll-mills, so that the cane is pressed six times, and on its passage from one mill to the next it is subjected to "maceration," by means of a stream of hot water, which assists in forcing the cane to yield its juice. The rollers of these mills vary in size, but the usual measurement is 30 inches in diameter and 60 inches in length, though some mills in use and now being erected have slightly larger rollers. The pressure of all these new mills is controlled by hydraulic means. The Krajewski Crushers and the National Shredders are used in several factories in front of the mills, and they are both said to do good work in the preparation of the cane for the rollers.

Clarification of juice by the Deming apparatus is gradually extending, and crystallisation in motion is now attracting the attention of those interested in the introduction of what is best amongst the novelties of sugar-making. Amongst the advantages claimed for the Deming system by those acquainted with its working are, that it economises from 25 to 33 per cent. over the open system and secures better results, that it is nearly automatic, one man easily operating it, and that the saving in labour often exceeds 10 per cent. on a sum twice greater than the total cost of the system. Chemical control in the sugar houses is still somewhat neglected, although there are marked indications of a desire on the part of mill managers to have resident chemists to check all losses.

The number of sugar plantations on the islands is 56. Of these the output in 1897 was as follows:—

	Number of Plantations.
Over 15,000 tons	1
From 10,000 to 12,000 tons	5
8,000 10,000 ,, ...	6
6,000 8,000 ,, ...	7
4,000 6,000 ,, ...	4
2,000 4,000 ,, ...	11
1,000 2,000 ,, ...	15
Under 1,000 tons	7

Of these 56 plantations, 44 are fully equipped with factories, the remaining 12 estates sending their cane to the adjacent factories, where it is manufactured into sugar.

Cement Combine in Japan.—There are 10 cement firms in Japan, and an effort to effect amalgamation is being made in order to reduce production and maintain prices. At one time these 10 firms did a fine business, when railway building, harbour making, and other enterprises were in a state of feverish activity after the war; but they have felt the recent depression, which affects all branches of business, and have come to the conclusion that their only plan is to combine for the purpose of putting an end to competition among themselves. Nine of the companies are said to have agreed to this course.

The Patent List.

list is compiled from Official sources in the Manchester l Laboratory, under the immediate supervision of E. Davis and Alfred R. Davis, who report professionally e value of Chemical Patents.

LICATIONS FOR ENGLISH LETTERS PATENT.

oftening Apparatus. W. J. Baker. 21,777. October 17.
is for Producing Lead Oxide and Treating Rough Litharge. iew's Lancashire, Cheshire, and North Wales District White Lead Co., S. Pope, and G. V. Barton. 21,830. October 17.
g Matters containing Sulphur. A. G. Green, A. Meyenberg, and Clayton Aniline Co., Ltd. 21,832. October 17.
ture of Producer Gas. H. C. Jenkins and T. C. Lowden. 21,851. er 17.
ture of Zinc Oxide. S. O. Cowper-Coles. 21,865. October 18.
Vessels containing Volatile Liquids G. B. Ellis. 21,935. er 18.
leposition of Metals. S. O. Cowper-Coles. 21,974. October 19.
Distillers' Waste Liquors. J. R. Garroway. 21,993. October 19.
l Sewage Tanks. F. W. Wentworth-Shields. 22,000. October 19.
ture of Gas and Apparatus therefor. H. H. Lake. 22,020. er 19.
Kaolin, Sulphate of Soda, Sand, and other Bodies containing and obtaining Iron Compounds. W. R. Ormandy. 22,192. er 21.
Kilns. P. Davies. 22,197. October 21.
ng Alumina from Aluminous Ores. E. Reynaud. 22,265. er 22.
es. R. C. Parsons and D. W. Nightingale. 22,269. October 22.

TRACTS OF LATEST COMPLETE SPECIFICATIONS.

abstracts are specially prepared for the Chemical Trade Journal, L RIGHTS *of publication are* RESERVED. *This is the earliest abstracts of Chemical and allied patents accessible to the public.*

le Spout to Attach to Drums containing Ammonia or other Strong bnoxious Chemicals. E. Beckton, 7, Lansdown-place, London. Eng. 25,898. November 8, 1897.

p is attached to the neck of the drum or carboy by wing-nut and carries a collar which, when tightened by thumbscrews, bead on the neck of the spout and holds it firmly in the f the drum. An india-rubber ring is interposed so as to make oint. An air tube passes through the hollow of the spout, and the contents to be drawn off regularly and with ease. There e figures.

d Manufacture of Waterproof and Weatherproof Paint. H. ner, of Leipzig-Lindenau, Germany. Eng. Pat., 28,484. Dec. 2, 1897.

ement is mixed with varnish, it being argued that any moisture tmosphere only hardens the cement on exposure. The follow- s a rough idea of the composition of the paint, though the es vary according to the pigments used :—30 to 40 parts of or suitable drying oil ; 40 parts of cement (or 30 of cement of silicic acid) ; and 20 to 30 parts of a pigment such as black, de, or barium sulphate. "Silicic acid" covers the bodies l in the general term silica.

ements in Processes for Extracting Caoutchouc. O. Zurcher, of ston, Jamaica. Eng. Pat. 15,569. July 15, 1898.

bject is to obtain natural caoutchouc from musa plants, such as , pisang, &c., and to also utilise the plants themselves to a reater extent than has been customary hitherto, as, for instance, sale of small quantities of the ripe fruit. The fruit is first , the pointed ends cut off, and the stalks, &c., separated. The e crushed, and the caoutchouc separated by maceration. The laid in a centrifugal, with the ends looking to the periphery of e, and whirled, when the sap is readily separated. The fruit then dried and ground to flour, as which it is highly nutritive. e of cutting the fruit is important. The middle of the ripening s about the best, and it should be borne in mind that the sap ost readily from fruit cut during the rainy season.

ements in the Production of Halogen Compounds of Silver. Newburn, 55, Chancery-lane, London (communicated by Chem. Fab. von den Gesellschaft mit Beschrankter Haftung, Radebeul, near Dresden, ny). Eng. Pat. 26,176. November 10, 1897.

le bromide, chloride, or iodide of silver is obtained treating ea's so-called "colloidal" silver with the requisite halogen. The ay be in the solid, liquid, or gaseous state, preferably liquid. thod of procedure is to add a 0·6 % chorine solution to 10 litres % dark aqueous solution of "colloidal" silver, until decolorisa- tion takes place. The process is carried out in the cold and in the dark. The separation of the soluble chloride from solution in a soluble form may be effected by the addition of gelatine and ammonium citrate.

A New or Improved Non-poisonous and Permanent White Paint or Varnish. L. Hunt, 2, 4, and 6, Albert Bridge, Manchester. Eng. Pat. 22,792. October 5, 1897.

The basis of the pigment contains 75 % of barium sulphate, and 25 % of zinc sulphite intimately mixed by being precipitated together. This base is ground with linseed oil and can then be made into a paint by thinning with oil and turps, or into a varnish by admixture with pale copal varnishes. The paint is unaffected by heat or sulphuretted hydrogen, and is innocuous.

THE ANDERSONIAN CHEMICAL SOCIETY.

THE opening address of the session was delivered by Professor Ferguson, LL.D., F.S.A., on Friday, last week, before a large audience—the honorary president, Professor G. G. Henderson, M.A., D.Sc., in the chair. The subject of the address was "Johann Rudolph Glauber and some of his discoveries." Dr. Ferguson, in introducing his subject, pointed out how harshly Glauber had been dealt with by his biographers. They had all followed the author of the "History of Human Folly," who calls Glauber a quack and a charlatan, but he, though he had judged Glauber so severely, had been right in his facts, while subsequent writers had not troubled to distinguish between fact and opinion, nor to form opinions for themselves by a study of Glauber's own works. Glauber, who lived in the seventeenth century, is now chiefly remembered by the salt bearing his name ; but, Dr. Ferguson said, the discovery or rather investigation of the properties of this compound—the Sal Mirabile—was only a small part of his work. The story of the discovery of this salt is not without interest. Glauber, while on one of his many journeys, fell sick of a fever on his way to Vienna, and had to stop at a roadside village. Here his digestion failed him entirely, and he could eat nothing. The natives told him of a well whose waters they said would cure him, and he, though sceptical, set out, taking with him a large piece of bread. When he arrived at the well he soaked a few crumbs in the water, and ate them with relish, though formerly food had nauseated him. In short, he ate the whole of the bread after he had drunk some water, and returned much improved. He investigated the salt in the water, and showed that it was not nitre, as had been supposed, for it was not fiery in nature, as he proved by adding it to burning coal. Dr. Ferguson showed how from nitre Glauber had prepared potash and nitric acid ; how he had found that nitrogenous matters made the best manure ; had proved that on heating antimony sulphide with corrosive sublimate a double decomposition took place, and that the resultant butter of antimony contained no mercury, but cinnabar was formed as well ; how he had invented an improved furnace and other apparatus, and had known and prepared a whole host of compounds. These results Glauber achieved without theories or with theories apt to mislead, and with very imperfect apparatus. He was not a theorist himself, and brought forward theories only when required. He gained little profit from his discoveries, and was always a poor man. Dr. Ferguson illustrated his lecture with many interesting extracts from Glauber's writings. Professor Henderson, in proposing a vote of thanks to Dr. Ferguson, said that he hoped the lecture that had been listened to that night was only an instalment of the history in chemistry in English which chemists were waiting for. This Dr. Ferguson was peculiarly fitted to produce, as he was the greatest living authority on the subject. The meeting closed with a vote of thanks to the honorary president, Dr. G. G. Henderson.

MANCHESTER MINERAL OIL TRADE.—The steamer *Phosphur* has arrived in the canal from Philadelphia laden with more than 1,000,000 gallons of petroleum for the Bagnall Oil Company's depôt at Mode Wheel, and the steamers *Elbrus*, *Suram*, *Kasbek*, *Robert Dickenson*, *Apscheron* and *Petriana*, have recently discharged at the same wharf. A large number of steamers have within the same period brought cargoes of oil in bulk to the Anglo-Caucasian Oil Company's depôt at Eccles, and at present there are three tank steamers bound or fixed for Manchester from Batoum.

SOCIETY OF CHEMICAL INDUSTRY : *London Section.*—The following is a list of the communications to be made at the opening meeting of the session on Monday, November 7th :—Mr. Watson Smith, (*a*) "On a Central American Lignite, soluble in Benzol," (*b*) "Exhibit of Müke Coal with Shale and Fossils" ; Messrs. A. W. Crossley and H. R. Le Sueur, (*a*) "A new method for determining the melting point of fats and waxes," (*b*) "Indian Edible Oils" ; Mr. Oscar Guttmann, "Exhibit of new filling material for reaction towers" ; Mr. G. Harris Morris, "The causes of stench in beer" ; Mr. Harold Harris, "The manufacture of pig-iron in India."

Selected Correspondence.

THE COMMISSION FOR THE DISPOSAL OF SEWAGE.

(*To the Editor of The Times.*)

Sir,—Lord Iddesleigh's letter in *The Times* opens up a question the importance of which neither the public nor the Legislature appears as yet to have realised. [This letter was given in substance in the report of the West Riding Rivers Board in our last issue.—Ed. *C.T.J.*]

He says that the Commission on Sewage Disposal would view with the gravest concern any postponement on the part of local authorities of the carrying out of works for the purification of trade refuse and sewage until the Commission have issued their report. He also says that a considerable time, perhaps even some years, must elapse before that report appears. Which does Lord Iddesleigh suppose will weigh most in the minds of local authorities—the grave concern of a little group of gentlemen at Westminster, or the serious risk that whatever plan they may adopt for the disposal of sewage and trade refuse will be condemned as inadequate by the Local Government Board, armed with the report of this Commission? Lord Iddesleigh has struck the heaviest blow that has been dealt to sanitary progress for many years.

The question for the public, and a very grave question it is from the ratepayers' point of view, is this—What is the proper scope and aim of a Commission of this kind? Is its proper business to collate, digest, and report upon the enormous mass of practical experience and knowledge obtained from the actual working of numerous sewage disposal systems, but never yet brought to a focus or treated as a whole? Or is it the proper business of the Commission to neglect all that practical work and to embark upon a prolonged search for an ideal system of its own, a search carried out by means of laboratory experiments in bacteriology and chemistry, and, therefore, having at best but a dubious relation to practical needs? Common sense would choose the first alternative without hesitation, first because it alone offers the smallest prospect of practical help within a reasonable time, and second because it is the only kind of investigation which the composition of this Commission fits it to undertake. The Commission itself has chosen the second alternative, which commits it to an investigation of a highly speculative and theoretical character, and of wholly indefinite duration. For such an investigation the Commission is absolutely unfit. Were such a thing desired it ought obviously to be entrusted to two or three experts. But nothing of the kind is desired or called for. Were such an investigation completed and published, the report would either be so much waste paper, or it would stereotype a method of sewage disposal which, on the one hand, would be used to condemn existing and practically efficient systems, and, on the other, would be an absolute bar to advance. There is no finality in science. Whatever the Commission may discover, at whatever point it may stop, there will be more to discover just beyond. The Commission is repeating the blunder made some years ago in another department, when this country was allowed to drop 15 years behind other nations in armaments, because some sapient persons at the War Office were waiting for the appearance of the ultimate and unimprovable type of gun. Sewage disposal is practically brought to a stand for an indefinite period, because this Commission is looking for an ideal system of its own, which when found is as likely as not to be rendered obsolete in 12 months.

But there is more than this. The Commission, working on its present lines, is in great danger of becoming a gigantic job. There is money, a great deal of money, in this sewage question. It is one of the biggest social questions with which the people of this country have to deal. The fishing inquiry, on which the Commission is embarked, means in itself a large expenditure, and it may be indefinitely protracted. It further opens the door to the creation of patent rights controlling indispensable details of the machinery to be subsequently forced upon all local authorities by the action of the Local Government Board. Has the Government so much as made the stipulation, loudly called for in the interests of the public, that no such private rights shall be, directly or indirectly, founded upon any results arrived at in the progress of this inquiry? I am, Sir, yours, etc, A. B.

October 31.

(*To the Editor of the Times*)

Sir,—The letter of Lord Iddesleigh pointing out the probable delay in issuing the report of the Royal Commission on Sewage Disposal is of great importance to rural district councils which are anxious at once to make a sanitary disposal of their sewage, but cannot do so without obtaining from the Local Government Board the sanction of a loan. The rural district council to which I belong has determined to treat the sewage of a town of a thousand inhabitants, which at present pollutes an important stream, by what is known as "Dibdin's Biological Process," which has been at work for the town of Winsford for many years, and has also been successfully adopted at Oswestry. The district council, however, is informed that no loan for the purpose will be sanctioned by the Local Government Board unless the process is recommended in the report of the Royal Commission now sitting.

Yours, etc., District Councillor.

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE first meeting of the session of the above section was held on October 26th at University College, Nottingham, Mr. James O'Sullivan being in the chair. The chairman remarked on the great loss that the Society had suffered by the decease of Mr. Rider Cook, and it was decided to send a letter expressing the sympathy of the members of the section to Mrs. Rider Cook.

Mr. L. Archbutt, F.I.C, read a short paper on "Arachidic Acid in Rape Oil," in which he gave the results of observations that led him to suspect that arachidic acid in olive oil did not necessarily indicate adulteration with earth-nut oil, as is generally supposed, but might be due to the presence of rape oil. He had found by Renard's process as much as 1·0 % of crude arachidic oil in rape oil, thus more than confirming the previous observation of Pouzio, who had found 0·4 % of this acid. In the discussion, Mr. Archbutt stated that the crude arachidic acid from arachis oil had been found to be a mixture of arachidic acid ($C_{20}H_{40}O_2$) and lignoceric acid ($C_{24}H_{48}O_2$). By repeated re-crystallisation from alcohol he had not been able to raise the melting point beyond 73·3° C. In reply to a question by Dr. Kipping, he explained that this was the point of incipient fusion determined by means of a capillary tube open at both ends.

Mr. Archbutt also read a paper on "The Constants of Curcas Oil." Having had occasion to examine an oil of which he had no description, he was led to believe that it was curcas oil, although some of the constants did not very closely agree with other published figures. He ultimately obtained an undoubted specimen of this oil from Dr. Lewkowitsch and examined it with the results shown in the following table, which seem to indicate that the undescribed oil was a genuine curcas oil. It is of interest to note that there is considerable difference between the constants now obtained and the only ones which have hitherto been available given in the last three columns of the table.

Analytical Data.	Crude Oil.	Refined Oil.	Refined Curcas Oil from Dr. Lewkowitsch. No. 2	Constants of Curcas Oil as stated by		
	(Undescribed)	No. 1		Gerard	Horn	De Negri and Fabris
Specific Gravity at 60° F.	0·9205	0·9705	0·9·05	0·911	0·9·92	0·918
Saponification Value, per cent.	19·28	19·25	19·26		at 15° C. 23 05	21·02
Iodine Value	98·0	99·5	98·8		127 0	100 9
Hehner Value		9·2			87·9	
Acetyl Value (Lewkowitsch)	14·03	9 82	8·36			
Reichert-Meissl Value		0·28	0·48		0·65	
Acidity (as Oleic Acid (per cent)	11·8	0·36	4·46		(Reichert Value)	
Unsaponifiable Matter		0·56				
Melting point of fatty acids, °C.		27·5°				24°-26°

Dr. Kipping remarked on the considerable difference in the acetyl values of the crude and the refined oils, asking whether the author could offer any explanation.

Mr. Archbutt replied that he could not, as there was no evidence of the crude oil having undergone oxidation. No doubt the oil supplied by Dr. Lewkowitsch had been refined by acid and No. 1 by an alkaline process.

Mr. Carulla thought it should not escape notice how closely the specific gravity agreed in the three oils tested by Mr. Archbutt, especially in view of the differences in the three others.

Mr. J. T. Wood then read a paper "On some notes on the constitution and mode of action of the dung bate in leather manufacture," in which the author showed the part that bacteria and the purely chemical compounds obtained from dung played in the process of preparing skins for tanning. These investigations have an important bearing on the production of an artificial bate having the properties of the dung bate, and which will not only be cleaner but more certain and regular in its action than the one usually employed.

In the discussion which followed, the Chairman questioned in a general way the accuracy of analysis of organic substances, in which the amount of chlorine had been obtained from the ash. He had known a case of malt having been given as containing no chlorine,

a matter of fact it had been present in unmistakable quantity, ive result having been due to seeking for the chlorine in the . Stanley Kipping said this would seem to indicate the forma- mmonia and the disappearance of the chlorine as ammonium

motion of Mr. Carulla a hearty vote of thanks was passed to rs of the papers.
xt meeting will take place in Derby on November 30th, when ected that the Chairman, Mr. James O'Sullivan, will read a

SCOTTISH SECTION.

st meeting of the session took place on Tuesday, November 7, Bath-street, Glasgow. Prof. G. G. Henderson presided, e earlier part of the sitting made a series of interesting refer- the existing affairs of the Society, and particularly of the Section. Mr. George Beilby, of Edinburgh, the chairman of on, had been chosen as President of the Society, a well-merited f which they were all proud. There was this drawback for wever, that Mr. Beilby, in accepting the presidentship, had ed to resign the chairmanship of the Section, which, otherwise, have held for another session. The Committee had seen fit t himself (Prof. Henderson) to the vacant office, relieving e same time of the vice-chairmanship, which they had worthily upon Dr. A. P. Aitken. He regretted his own preferment in for Mr. Beilby possessed qualities (making for the advancement ction) to which hardly any other member could lay claim,—but a loss to the Section was a gain to the Society as a whole, felt bound as the first act of the new session to t a message of gratification and appreciation be formally con- the new President. In this the meeting unanimously and concurred. The Chairman then referred to the immediate the Petroleum Inquiry Commission which had formulated it- recommendation to Parliament to raise the flash-point of oil to 100° at least. The movement (it would be remembered) directly initiated by their Section, and it was an honour to d particularly in a personal sense to Mr. Stewart who had led k with so rare a dash and persistence, that the prospect of a led for reform had thus been statedly opened up to the country

The business of the Section would be continued on the lines by the late chairman. Each meeting would as far as possible itself to one department of industrial chemistry, and the of the places of meeting would be influenced by considerations rial locality, the same as last session. Already, some part of session had been sketched out, comprising minerals, agri- paper making, dyeing, etc. The Committee had also on trying the effect of one stated meeting of a social character, view to a closer intimacy between members, and there- an increased *esprit de corps* and efficiency on the part ection as a whole. These various points of intimation and by the Chairman were most cordially received by the members who were over the average in number, and that in spite of an of very dirty weather. The meeting then proceeded to the of a paper, as announced, entitled "Some chemical properties coals," the production of Messrs. W. Carrick Anderson and oberts. The paper, which was supplemented by data on the ave results of analyses of various Scotch coals, describing their istic properties, particularly with reference to their coking sidue left on heating, and amount of volatile matter formed. lucts of the oxidation of the coals were dealt with, and con- regarding the composition of coals in general were drawn from f the nature of these products.

OLIC ACID IN A VINEGAR CRUET.—At an inquest in London day last, on the body of a hospital ward servant who had herself, Dr. Gayton, the medical superintendent of the remarked that a great deal of poison had always to be kept e wards. The Coroner said it was always easy to get poison, carbolic acid. The other day some was ordered for his nd it was sent by the oilman in a vinegar bottle covered with abels. One of his servants used it to fill the vinegar cruet, is served at table, where it was only detected by the smell.

LULU FERTILIZER TRADE.—Although the soil of the Hawaiian undoubtedly rich and fertile, the demands made upon it by ntinuous cropping without any alternation of crops, renders f fertilising agents a necessity. There are two local factories, nufacture about 10,000 tons per annum. One of the factories iderable size, making its own sulphuric acid, and producing a which is said to be of excellent quality. In addition to the nanufactured locally, there is a large and increasing importa- ade-up fertilisers from the United States and Europe, the total 1897 reaching £83,068.

Legal Intelligence.

SUPREME COURT OF JUDICATURE.

COURT OF APPEAL.

(*Before Lord Justice A. L. Smith, Lord Justice Rigby, and Lord Justice Collins.*)

THE MAGNOLIA METAL COMPANY AND OTHERS V. THE TANDEM SMELTING COMPANY.

This was an application by the defendants for judgment or a new trial in an action tried before Mr. Justice Ridley and a special jury.

Mr. McCall, Q.C (Mr. T. F. Hobson with him), appeared in support of the application, and said that the case raised a question between rival manufacturers of anti-friction metal, a soft metal used for lining the bearings of machinery. It appeared that the plaintiff company or their predecessors had been manufacturing such metal for some years in England and America, first under a secret process, and subsequently under a patent obtained in England on June 3rd, 1890 In 1896, an action was brought by the plaintiff company against the Atlas Metal Company, which had been established by persons who had been employed by the plaintiff company as their agents in England. In that action it was held by Mr. Justice Collins that the plaintiffs were not entitled to the exclusive use of the word "Magnolia," and his judgment was affirmed by the Court of Appeal. In the meantime the defendant company had been formed to take over a similar patent, and the plaintiff company had obtained from Mr. Justice North an injunction restraining the defendants from making use of the word "Magnolia" in connection with the manufacture of their metal during the currency of the plaintiffs' patent. In 1897 an order was made by Mr. Justice Kekewich removing from the register of trade marks all the plaintiffs' trade marks except the magnolia flower. In January, 1898, Mr. Justice Romer declared the plaintiffs' patent to be void. The defendants then thought that they were entitled to continue the manufacture of their metal under the name of Magnolia, and proceeded to do so. The plaintiffs brought this action, in which they sought to restrain the defendants from using the word "Magnolia" and from passing off their metal as the plaintiffs' metal. In answer to questions put by the learned Judge at the trial, the jury found—(1) that up to the time of the judgment of Mr. Justice Collins in November, 1896, "Magnolia" did mean the manufacture of the plaintiffs; (2) that the metal made by the defendants was not practically and commercially the same as that made by the plaintiffs; (3) that the defendants did not use the name so as to pass off their metal as the actual metal of the plaintiffs, although they did use the name so as to pass off their metal as similar to that manufactured by the plaintiffs. Mr. Justice Ridley, after hearing arguments, on further consideration granted injunctions restraining the defendants from advertising themselves as manufacturers of Magnolia metal and from representing that the metal manufactured by them was Magnolia metal without distinguishing clearly their metal from the plaintiffs' metal, and also restraining them from representing that their Tandem "C" metal was the same as Magnolia metal. The defendants now asked for judgment on the grounds—first, that on the evidence there was no case to go to the jury; secondly, that on the findings of the jury judgment ought to be entered for the defendants; thirdly, that, if the verdict was taken in the sense in which the plaintiffs propose to take it, it was against the weight of evidence. The first answer of the jury must be taken to mean that since 1896 the plaintiffs had no exclusive right to the use of the word "Magnolia," and it followed that the plaintiffs had no right to restrain the defendants from using the word "Magnolia" unless they could prove special damage, as laid down in "White *v.* Mellin" (1895, A.C. 154). The plaintiffs' patent having been declared void, and all their trade marks having been removed except only the magnolia flower, the defendants now had the right to manufacture their metal, which was chemically the same as Magnolia metal, and to call it by that name. The defendants, therefore, were entitled to judgment.

Mr. Bousfield, Q.C., and Mr. R. Newton Crane appeared for the plaintiffs, and argued in support of the judgment of Mr. Justice Ridley. With regard to the decision of Mr. Justice Collins, in the previous action against the Atlas Company, it was to be noticed that, though that learned Judge negatived the right of the plaintiffs to the exclusive use of the word "Magnolia," he granted a limited injunction against the defendants restraining them from passing off their goods without clearly distinguishing them from the plaintiffs' goods. In the first place, assuming that the plaintiffs had no exclusive right to the use of the name "Magnolia," the plaintiffs were entitled to maintain this action in accordance with the law laid down in the Yorkshire relish case, "Powell *v.* Birmingham Vinegar Brewery Co." (1894, A.C., 8). If then defendants were making "Magnolia" metal, they might call it by that name. But the second answer of the jury found that the defendants' metal was not "Magnolia." That answer was in the plaintiffs' favour. The defendants were not entitled to pass off as "Magnolia" that which was not "Magnolia" at all to the plaintiffs' injury. In the second place,

the plaintiffs had a right to the exclusive use of the word "Magnolia." It was a mistake to assume, as the defendants did, that the first answer of the jury was a finding that "Magnolia" now meant something different from what it meant in 1896. For some time after that date the defendants, even while they manufactured their metal and professed that it was the same thing as "Magnolia," did not venture to call it by that name. For years they called it Tandem "C" metal, but recently they had turned round and called it "Magnolia." The judgment of the learned Judge was right and ought to be affirmed.

The Court dismissed the application.

Lord Justice A. L. Smith in his judgment said:—This is an application by the defendants to enter judgment for them upon the ground that, upon the findings of the jury, they are so entitled, and for relief upon other alternative grounds, which I will not consider, for in my judgment the reasons I am about to give show that the findings of the jury entitle the defendants to judgment. In order to disentangle the case it is necessary to ascertain clearly what is the cause of action the plantiffs seem to make out (and that, in my opinion, has been lost sight of in the arguments on behalf of the plaintiffs) and the relevancy of the answers of the jury to that cause of action. It is admitted by the plaintiffs that they have established no cause of action against the defendants for defamation of their goods, for the simple reason that the plaintiffs have given no evidence of special damage, without which this cause of action is not maintainable—see "White *v.* Mellin" (1895, A.C., 154) in the House of Lords The other, and only other, cause of action which the plaintiffs can have upon the materials in the case is that they were manufacturers of an anti-friction metal called and known as Magnolia metal, which name designated metal of the plaintiffs' manufacture, and that the defendants, to the plaintiffs' injury, passed off their manufacture of anti-friction metal as being metal manufactured by the plaintiffs. It was held by my brother Collins, and affirmed in the Court of Appeal, in an action by the present plaintiffs against the Atlas Metal Company, that the plaintiffs had no monopoly in the word "Magnolia," though he and we held that in that case the plaintiffs were entitled to an injunction restraining those defendants from vending their wares without distinguishing them from the wares of the plaintiffs. There is in the present case no finding by the jury that the plaintiffs since November, 1896, the date of that judgment, were entitled to a monopoly in the word "Magnolia" any more than in the case before my brother Collins, when he held that they were not. I agree in what he then held as to this, affirmed as he was by the Court of Appeal, though that judgment is no estoppel in the present case. The plaintiffs, then, having no monopoly in the word "Magnolia," to establish their cause of action must prove two things—first, that the word "Magnolia," when the defendants used the word as they subsequently did, designated goods manufactured by the plaintiffs, to which designation the plaintiffs were then entitled; and, secondly, that by what the defendants then did they passed off their manufacture of anti-friction metal as that of the plaintiffs to their injury. Both these issues are upon the plaintiffs to make out, and without establishing both their action fails. It seems to me clear that the first finding of the jury is not a finding that since November, 1896, the word "Magnolia" meant the manufacture of the plaintiffs. The plaintiffs have therefore failed to prove the first necessary issue, and this alone entitles the defendants to judgment. But if this were not so there is another ground fatal to the plaintiffs. The plaintiffs have to prove that the defendants passed off by what they did their manufacture as the manufacture of the plaintiffs. The second finding of the jury is obviously not a finding that the defendants had been passing off their manufacture as being the manufacture of the plaintiffs. The result is that the plaintiffs have failed to establish either of the issues incumbent upon them to prove in order to maintain their action. It was argued for the plaintiffs that the case was governed by "Powell *v.* Birmingham Vinegar Brewery Company" in this court and the House of Lords, and that the jury had found that the metal made by the defendants was not practically and commercially the same as that made by the plaintiffs. I fail to see how this finding avails the plaintiffs in any way upon the sole cause of action which they have; but I would point out that in "Powell *v.* Birmingham Vinegar Brewery Company" the plaintiff had a secret recipe for making a sauce which he had for years made and called Yorkshire Relish, and it was proved that the defendants set to work to imitate his sauce as best they could, and called it Yorkshire Relish, and palmed it off upon the public to the detriment of the plaintiff. In the present case the plaintiffs themselves patented, and thereby gave out to all the world, the means of manufacturing the anti-friction metal which they called Magnolia, and they continued to manufacture that metal and to sell it by that name, protected by their patent until it was exploded. In the present case the defendants have done nothing like what the defendants did in Powell's case. What the defendants have done is to palm off nothing, but to take, when the plaintiffs' patent came to an end, that which the plaintiffs had published to the world as the consideration for obtaining their patent, the plaintiffs' trade mark in the word "Magnolia" having also come to an end. They have called that Magnolia which the plaintiffs had called Magnolia when protected by their patent. In Powell's case the plaintiff proved that he had the right to the name of Yorkshire Relish, as indicative of his goods, and that the defendants had palmed off their spurious goods as those of the plaintiff to his detriment. In the present case the plaintiffs had not proved that they had, when the defendants did what is complained of, the right to the name of Magnolia as indicative of their goods, nor that the defendants by what they did palmed off their manufacture as the manufacture of the plaintiffs. In my judgment the appeal of the defendants succeeds, and must be allowed, and judgment must be entered for them with costs here and below.

Lord Justice Rigby and Lord Justice Collins concurred.

W. AND J. LOCKETT V. LAGUNAS NITRATE COMPANY (LIMITED) AND LAGUNAS SYNDICATE (LIMITED).

This was an application by the Lagunas Nitrate Company (Limited) for judgment or a new trial in an action tried before Mr. Justice Kennedy and a special jury. The action was brought under an agreement entered into on December 21st, 1891, between the plaintiffs, Colonel North, and the defendant syndicate, whereby the plaintiffs were constituted sole mercantile agents in England for the syndicate for ten years from January 1st, 1892, and were entitled to a commission of 2½ per cent. upon purchases and sales of nitrate for the defendant syndicate; and there was a provision that the agency might be terminated by six months' notice in writing given by the defendant syndicate to the plaintiffs. By an agreement dated June 18th, 1894, the defendants, the Lagunas Nitrate Company, agreed to buy from the syndicate part of the nitrate grounds belonging to the syndicate, and the company agreed with them to be bound by the agreement between the syndicate and the plaintiffs of December 21st, 1891. The plaintiffs alleged that the defendant company declined to carry out the agreement, and employed other persons to sell nitrate in England for them, and brought this action claiming a declaration that the agreement of 1891 was binding upon the defendant company, the sums due to them under the agreement, an account of the sales effected through other agents, and an injunction. The defendant company pleaded *inter alia*, that the directors of the company were, at the time of the alleged agreement of June, 1894, identical with those of the syndicate which had sold to it, that Mr. R. R. Lockett (a member of the plaintiff firm) was one of the directors, and that the directors fraudulently and in breach of their duty as directors purported to impose the Lockett agreement and its burdens and liabilities on the defendant company. In June, 1896, an action was brought in the name of the defendant company in the Chancery Division against the syndicate and the directors personally claiming rescission of the contract, but Mr. Justice Romer refused to rescind it. Mr. Justice Kennedy held that the judgment of Mr. Justice Romer in the former action was conclusive as to the validity of the agreement of June, 1894, and that that question could not be reopened. The jury found that the defendant company employed plaintiffs upon the terms of the agreement of 1891, and that there was no breach of duty on the part of the directors. There was also a defence raised that there was no memorandum in writing of the agreement whereby the defendant company was to be bound by the agreement of 1891 so as to satisfy the Statute of Frauds. The learned Judge overruled this contention, and gave judgment for the plaintiffs upon the findings of the jury.

Lord Justice A. L. Smith delivered a long judgment, in which, after going fully through the facts of the case, he came to the conclusion that the jury had rightly found that the company had bound themselves to the plaintiffs, in the same way as the syndicate had previously bound themselves to the plaintiffs. It was clear that the company had taken over the agreement *in toto*, and any other verdict would have been wrong. Further, he thought that there had been no misdirection by the learned Judge, and no misreception of evidence such as to justify a new trial. With regard to the defence raised on the Statute of Frauds, in his opinion there was ample evidence of a memorandum in writing sufficient to satisfy the statute. The appeal, therefore, failed, and the judgment of the learned Judge must stand.

Lord Justice Rigby and Lord Justice Collins delivered judgments to the same effect.

HIGH COURT OF JUSTICE.

QUEEN'S BENCH DIVISION.

Before the Lord Chief Justice of England and Mr. Justice Wills.

RIVER RIBBLE COMMITTEE V. HALLIWELL—SAME V. SHORROCKS.

These were two appeals from the decision of a County Court Judge on two river pollution cases. The two appeals were heard together.

Mr. Cripps, Q.C., and Mr. F. Mellor appeared for the appellants, the Ribble Joint Committee; Mr. Danckwerts appeared for the respondent Halliwell; and Mr. Bradbury for the respondent Shorrocks.

The Court upheld the decision of the County Court Judge.

The Lord Chief Justice, in giving judgment, said that the case was important because, on the one hand, it was important to prevent pollution of rivers, and, on the other hand, it would be very important to

ıfacturers if a certain view of the Act were taken. There were ıtions. The first, whether there was such evidence as to make ty of the County Court Judge to find that an offence had been ed under section 2. Secondly, what was the effect of section ıe scope of the Act was to prevent pollution of rivers. Section l the offence. The only words therein applicable to the res- in the case were permitting "solid putrid matter" to fall into . The matter must be both putrid and solid, and that at the ntered the river. If the matter were not both putrid and solid nce charged would not have been committed. Section 20 olid matter, section 6 dealt with liquid matter. His Lord- ı went through the facts, and pointed out that the respondent ıdd any solid matter to the water in the reservoir, but merely the water as it came to him. The definition in the act of tter excluded "particles in suspension in water." Here 97·6 of the effluent at the time it came into the river was water 2·4 per cent. solid. Could that be called solid matter? No ld say so. It did not, therefore, come within the material the section. It was largely a question of fact, and the County udge had held that it was not solid matter. The Court could hat he was wrong. On the second question he was of opinion n if solid putrid matter were being put into the river by the nts, under the circumstances section 17 of the Act protected Ie had the right of impounding the water and could only use it ıe to him with the pollution from above. It was a necessary nce that the water should become putrescent, but he had the impound the water, and the section held him harmless from the y consequences of the reasonable exercise of that right.

ustice Wills concurred, pointing out that the right in the owner to impound the water implied the right to return the the river when he had done with it.

to appeal was given.

E CORBETT SCHOOL OF AGRICULTURE.

ETING of agriculturists. convened by the Worcestershire Cham- r of Agriculture, was held last Saturday, to consider the offer of . by Mr. John Corbett, of Droitwich, to found a school of ıre for the county. Mr. Corbett's scheme proposed to take the tenant farmers as soon as they left the elementary or grammar at the age of 15 to 18 years, and give them a *minimum* term ears' agricultural instruction at the school of agriculture. It nded that most of the students should be boarders, but day uld also be provided for. The donor proposed to give a farm urpose, and the existing buildings might be adapted to the ıents of the school, and blacksmiths', wheelwrights', and car- shops could be added. Subjects for study would include the ment and cultivation of the soil, the breeding and rearing of ractical veterinary science, dairying, fruit-growing, poultry- and book-keeping. The cost of boarding and instruction mount to £40. or £50. each per annum, and it was proposed arly fee of £15. should be charged, but all points of that kind e left to the committee to arrange. Mr. E. V. V. Wheeler, on behalf of the technical education committee of the county promised every assistance and support to the school from that d on the motion of Admiral Britten, seconded by Mr. Alfred , M.P., a resolution was passed heartily thanking Mr. Corbett xtremely generous offer, and asking his consent to the naming hool "The Corbett School of Agriculture."

ELECTRICAL INDUSTRY.—Mr. Emile Garcke has just pub- is "Manual of Electrical Undertakings," now in its third year. table given in the volume we take the following particulars, the amount of capital involved in the several branches of the l industry in each of the three past years :—

	1898.	1897.	1896.
raph	£31,983,365	£31,272,675	£31,103,254
hone..... ...	7,159,368	6,483,529	6,482,979
y companies ...	8,407,628	6,647,792	5,831,073
y municipalities	5,734,938	3,509,317	1,967,000
ion	14,406,140	8,533,173	6,084,672
facturing	10,535,937	8,519,430	6,596,244
llaneous	6,514,644	4,223,562	2,944,303
Totals	£84,742,020	£69,209,478	£60,109,525

ed that the figures do not include Government telegraphs and es, the increased capital in each of which sections was about o. The National Telephone Company expended £460,937. on ıccount during the year, the remainder being raised by com- operating in foreign countries. The largest increase, being £6,000,000., took place in the capital expended on electric , while the number of companies increased from 30 to 51.

Reports of Companies.

WHITE LEAD COMPANY, LTD.

THE ordinary general meeting of this company was held as we went to press on Friday last week, at Cannon-street Hotel, Sir Henry Tyler in the chair. In moving the adoption of the report the Chairman said that its contents were in every respect melancholy reading. They had kept the business of the company going for more than nine years at a loss of many thousands of pounds every year, in the vain hope of being able ultimately to make it pay. But competition, and especially German competition, had been too much for them in keeping down prices, and preventing the possibility of profit. They were, no doubt, foolish in going on so long in the face of an adverse trade combination and in the absence of the support which they might fairly have expected from consumers. He said "fairly expected," because he maintained that, other things being equal, or nearly equal, the preference ought to be given to a non-poisonous over a highly-poisonous article in common use amongst a large number of workers. They were influenced mainly by two reasons for continuing the struggle. They hoped, in the first place, by constantly improving and cheapening the manufacture to establish the industry, and place it on a profitable basis in the interests of the shareholders, and, in the second place, to contribute to the health and comfort of lead workers, who comprised a considerable number of the community. He was confident they would agree with the directors that they were not terminating the works prematurely, as there could no longer be any possible hope for benefits to the shareholders. The directors held one-sixth of the whole of the share capital, and they would not ask him to expend many thousands a year in the future as he had done in the past. They might ask how he personally would stand as the result of liquidation. If, as he hoped, the sale of the stocks was sufficient to pay off the overdraft at the bank and the few remaining trade liabilities, there would then be a debt to him of over £53,000., of which £30,000. was in debentures, he being the only debenture owner. The property of six acres at Possil Park, Glasgow, he was compelled to purchase at a cost of £10,000 to avoid serious litigation which was commenced against the company under Scotch law to compel the company under the lease to erect further buildings, which would have been a great and useless expense. His own loss would therefore amount to £53,000. of debt owing to him and £10,000. for the property, less whatever might be realised in the disposal of the property and works. And to this must be added, of course, the loss of shares, of which he had never sold one. Putting all these figures together, he estimated that his loss would be at least £60,000., and he only hoped it might not be more.—Sir John Stokes seconded the adoption of the report.—Mr. John Samson, as an amendment, moved the adjournment of the meeting for a month, and proceeded to say that they never would have been members of this company but for the prospects held out to them in the prospectus. That document, he held, was full of misrepresentations from beginning to end, and if they had persisted in litigation, as they ought to have done, they could have had all their money back. Sir Henry Tyler no doubt had found a considerable sum of money to carry on the business; but that did not alter the principle that money was obtained from them by statements in the prospectus which could not be proved. He preferred a judicial liquidation to a voluntary one.—Mr. Bale seconded the amendment.—The Chairman, in reply, reminded the meeting that Mr. Samson, with others, joined in supporting the promoters of the company as against the directors, and read the following report of a committee of shareholders, of which Mr. Samson was a member :—"From the report of the experts employed by us and what was seen by inspection of the works, and from the information and documents recently supplied to us, the members of the committee have come to the conclusion that with adequate capital and a practical board of directors there is no reason whatever why the expectations held out by the prospectus should not even now be realised, and consequently, after carefully considering the situation and consulting our solicitor, we have decided to advise the shareholders to discontinue litigation." (Loud laughter.) —The amendment was lost, and the report was accordingly adopted.—The resolution for winding up the company was then put to the meeting, but on a show of hands was not carried by the necessary majority. —A poll was then demanded by the Chairman, but the opposition did not persist in their objections. It was intimated that the directors held 44,176 votes and proxies. The voluntary liquidation was thus agreed to, Mr. E. A. Foster, of 6, Great St. Helens, being appointed liquidator.

SAN PABLO NITRATE CO., LTD.

In moving the adoption of the report at the tenth annual meeting of this company, held at Winchester House last week, Mr. R. Harvey said, last year he told the shareholders that they had stopped the works and had reduced the expenses. This condition of affairs continued, and the stock remained untouched. They had not made any more

nitrate, as the price was not high enough to justify them reopening the works, and they were holding their stock in the hope of finally selling it without loss, and possibly at a small profit. For four years the directors had taken no fees, but in future they had decided to accept one-half until the company was again in a dividend paying condition. There was no immediate prospect of such a condition, for when he spoke last year nitrate was at 4s. 11d a quintal (too low for a profit), and now it was 4s. 9d, so that the outlook, if anything, was not so bright. Efforts were still being made by the Permanent Nitrate Committee to form a combination for the limitation of output, and if this was effected the company would be able to resume work at a fair and reasonable profit. In September last it looked as though a combination would be arranged, but unfortunately three or four producers objected to any assessment of the productive powers of their works, and would not allow the committee to fix their quota of production. Several other meetings had been held, and it was quite possible a combination would be effected; but he was pessimistic as to an immediate conclusion, for he knew of some large manufacturers who had sold ahead for the best part of next year. The decree of the Government of Chili requiring 45 per cent. of the duty on nitrate of soda to be paid in gold was another hampering circumstance; but it was hoped the Government would decide to take drafts on England for the amount, which, as the nitrates were sold for sterling, would not affect them so much as if they had to buy sterling gold in the country.—Mr. J. J. Smith seconded the adoption of the report, which was agreed to unanimously.

DIVIDENDS.

THE KELLNER-PARTINGTON PAPER PULP COMPANY LIMITED.—At a meeting of the directors of this Company held on Tuesday, it was proposed to recommend to the shareholders a dividend for the half-year ending September 30 last of 6½ per cent., free of income tax, making, with the interim dividend paid in May last, a total dividend for the year at the rate of 12½ per cent.

CLEVELAND SALT COMPANY.—The directors' eleventh annual report to the shareholders was issued on Tuesday at Middlesbrough. It states that the demand for salt has been lower than the average of the last ten years, but the Company's plant has been working well, and the conditions of manufacture have been favourable. The profit on the year has been £4,691., and a dividend of 6 per cent. is recommended on the preference shares and 6 per cent on the deferred shares.

Trade Notes.

THE UNITED ALKALI COMPANY'S NEW OFFICES.—Some time ago we learned that this company was contemplating moving to the splendid offices formerly occupied by the White Star Line, and we now find that the first step in the change has been made, and some of the business departments have been installed at the new premises, 30, James Street, Liverpool. The offices are said to be the finest in the city.

NEW RIO TINTO COPPER COMPANY, LIMITED.—We referred to this company recently, and now learn that a petition has been presented on behalf of Messrs. A. and E. J. Prechter, asking for the compulsory winding up of this company. It is now stated that the petitioners' debt and costs have been paid, and the petition was dismissed.

MAIDSTONE WATER SUPPLY.—A meeting of the ratepayers, convened by the Mayor, was held at Maidstone, on Monday, for the purpose of passing a resolution authorising the corporation to promote a Bill in Parliament to empower them to purchase the undertaking of the local water company (*vide C.T.J.*, Nos. 570, 573, and 588, pp. 285, 327, and 127). The resolution was carried by an overwhelming majority, but a poll was demanded. The result, it is expected, will be favourable to the purchase scheme, the epidemic of last year having converted many who were opposed to the proposal two years ago, when it was vetoed by the ratepayers.

MATCHES ON AN OIL STEAMER.—Captain Farrant, of the steamship *Drumlanrig*, was summoned on Monday before the Birkenhead magistrates for having 28 boxes of matches, other than safety matches, in his oil-laden vessel. Inspector M'Clelland said that the *Drumlanrig* entered the petroleum berth on the north side of the West Float on October 21st. Next morning witness found 28 boxes of common matches, one box lying in a berth. A parcel containing the other boxes was handed to him. When told that they should not have taken such matches on board, it was stated that the men had used them during the voyage, and had never been told not to do so. Explosives-inspector Gunning said that the oil on the steamer flashed at 63°, 10° below the legal standard. In fact, it flashed at its own temperature. In defence, the captain said he had given instructions for the steamer to be searched on entering the dock, and did not know that matches were on board. He had been most careful during the voyage, knowing that several vessels had been blown up. A fine of £10. and costs was imposed.

THE SWINTON SEWAGE DIFFICULTY.—In consequ representations made by Mr. Lees Knowles, M. P., and Mr. Clare, M P., the Local Government Board recently sent Majo C.E., one of their inspectors, to inspect the sewage works Swinton and Pendlebury Urban District Council, with a reporting as to their capacity for the treatment of the sewag district. The London authority recommended the district aut take 125 acres of land for the treatment of their sewage; Council pointed out that they were already producing an effluer satisfied the Mersey and Irwell Joint Committee, and whe improvements now being carried out at the works un superintence of Sir Henry Roscoe have been completed the w be "second to none for efficiency in Lancashire." The sewage farm consists of 37 acres, and Messrs. Lees Know Leigh-Clare have pointed out the impracticability as well as the expense of the requirement as to additional land. It is ho Major Carey will report favourably upon the position.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are firmer at 8½d. to 9d. for 90's, and 9d. for 50 the permanency of the change is dubious. Creosote and na are firm. Carbolic acids in good request, and inclined to ad price. Naphthas quietly steady. Pitch steady at last qu Anthracene neglected.

Sulphate of ammonia is firm, and sellers have once more the ascendancy. The demand has been good, especially in th and the market closes very firm with London outside makes, Liverpool, £9. 17s. 6d.; Hull, £9 15s.; and Leith, £9. 16s prompt. Beckton, nominal.

MISCELLANEOUS CHEMICAL MARKE

In the alkali trade business is only moderately active. V whole show no tendency to improvement. Competition is stil bleaching powder for forward business in the home trad nominally £4. 5s. f.o.r. makers' works; export demand £5. 5s. to £5. 10s. f.o.b. Ammonia alkali, 58%, bags, £3. f.o.r. makers' works, both for prompt and forward delivery. soda all round is easier, more especially on forward business. quotations are as follows:—F.o.b. Liverpool, 77%, £7. 15 £7. 10s.; 70%, £7.; 60%, £6. per ton. Chlorates have down both for potash and soda at 3¾d. per lb. Saltcake 26s. per ton bulk, f.o.r. Recovered sulphur, £4. 12s. 6 f.o.r. Sulphate of copper has advanced to £18. f.o.b. powdered arsenic is a steady market at £16. 15s. to £17. f.o for best brands. There is good inquiry for potash, caustic an ate, and prices are firm. Yellow prussiate of potash uncl 6⅝d.; soda, 4⅞d. per lb. Brown acetate of lime steady, with a tendency, at £5. 5s. to £5. 10s. c.i.f. Grey dearer at £7. ton. Acetic acid unaltered. Glycerine generally is firm salts dearer. Muriate of ammonia is in better request, but pr no improvement. Carbolic acids, crude and crystal, are price, with rather more inquiry. Upon the whole there i demand for chemicals, but it has not yet been such as to material effect upon values.

REPORT ON MANURE MATERIAL.

There has been a little more activity in the market, and round have been fully maintained.

There has not been a large business in mineral phosphate U.K., next season's requirements having been about covered supplementary parcels for shipment within the next few mo full prices are being paid.

There is nothing to report in River Plate bones, and in th of cargoes offering prices are nominal. There is good inquiry Indian bone meal, but £5 per ton is now required in all and although this price has been paid, buyers do not com at the figure.

Nitrate of soda is firm at 7s. 9d. per cwt. on spot for fine q

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron quiet: Scotch warra at 49s. 5½d.; Middlesbrough, 47s. 8d. cash; and 56s. 3½d. Copper firm: Chili bars, G.O.B.'s and closed at £54. 11s. 3d. to £54. 16s. 3d. cash, and £54. 1 £55. 2s. 6d. three months. Tin easier: Straits closed at £82 to £83 2s. 6d. cash, and £83. 2s. 6d. to £83. 12s. 6d. three Australian, £83. 5s.; English ingots, £85. 10s. to £8 strong: Spanish, £13. 12s. 6d.; English, £13. 15s.; Silesia ordinary, £24. 15s. 0d. Nickel, 1s. 2½d. Antimo

ver: First hands, £7. 5s.; second hands, £7. 4s. *Copper* eady: Cape, 5 5/16 to 5 5/16; Copiapo, 2 3/16 to 2 3/16; Libiola, 1 7/8 Mason and Barry, 3 1/16 to 3 1/8; Rio Tinto, 29 1/8 to 29 1/4; 7 1/16 to 7 1/16.

VERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

.—Palm oil is very firm in the matter of price, and though s been a rather better demand the business done is not worth g. Olive still keeps on the move, with a quiet demand, and ntinue steady. Linseed is firm, sellers still asking 18s. 6d. for Liverpool makes in export casks. Cottonseed is but ely inquired for at 15s. 6d. to 15s 9d. for Liverpool refined. il is firm with good business done in first pressure French for r's shipment, and also spot, the latter having been concluded Good seconds Calcutta stand at 3 1/16d. and Madras 2 13/16d. to There is a good inquiry for tallow, and prices are firm, but the actually done is rather small. Resin is very firm in accord- th our special report last week, and there is a fairly good in spite of prices hardening. Spirits of turpentine having 28s. during the week are down again to last week's quotation, steady at 27s 9d. Petroleum is unchange in price or position. ES.—A fair amount of business has again been concluded in n Western linseed cakes on the spot, and the recent full rates n well maintained at £7. 7s 6d. to £7. 10s.; Liverpool makes to be well held for £8. to £8. 15s, according to brand, and ery fair consumptive sale thereat, whilst in other descriptions rm tone still rules, but there is a slight pause in the demand, eing somewhat indisposed for the moment to pay the advanced emanded, viz., £7. 10s., usual terms for both Bombay and ate and £7. 10s. to £7. 12s. 6d. per ton for Russian net cash. ue of American decorticated cottonseed cakes is still given at 3d. to £6., according to quality, for good to choice brands, eady trade resulted; whilst a further advance of 2s 6d. is now or Liverpool makes, sellers now asking £6. 7s. 6d. to £6. 15s. , according to brand, with a fair business doing thereat. ticated Liverpool makes are selling to a very fair extent at to £4. 15s. per ton, according to brand, and holders remain gly firm thereat. Spot lots of prime quality Egyptian continue with sellers still asking £4. 7s. 6d. per ton.

LL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

—In the oil trade no special feature has developed, but linseed rs to be of a steadily increasing value, owing, no doubt, to the of seed in the near future being so limited, spot seed being ly unobtainable. Although the same remarks apply, to limited o the supply of cottonseed, it has little appreciable effect upon l. The imports to date have been, as against the same time a o:—Wheat, 2,378.882 qrs. against 1,899,960 qrs.; linseed, qrs. against 567,555 qrs.; cottonseed, 150,940 tons 153,383 tons; rapeseed, 65,415 qrs. against 71,052 qrs.; oil- ,330 tons against 7,334 tons; olive oil, 4,521 tuns against 3. Linseed oil is dearer: spot, 16s. 7½d. per cwt. naked, Dec; Jan.-April, 16s. 4½d.; boiled and refined £1. to per ton extra. The exports have been for the week 67 tons, 5 tons same week a year ago. Refined cotton oil has been ut closes again down at 13s. 3d. per cwt., spot, naked, and ov.-April at 13s. 4½d. naked; casks £1. and ordinary barrels per ton extra. The export for the week has been 186 tons, 00 tons same week a year ago. Seville olive oil £32. per tun. soap unchanged. Castor oil, cold drawn, extracted here, 4d. cases, 30s. 6d. per cwt. in barrels; pure firsts, 3 3/16d. per lb. 28s. 2d. per cwt. in barrels; pure seconds, 3 1/16d. per lb. in 7s. per cwt. in barrels. Cod oils, £16. to £18. per ton. rm and unchanged. Oleines from £17. 10s. per ton, ex wharf anish butter, 118s. per cwt.; Swedish, 118s; Dutch, from cwt.; Canadian, 95s. to 112s. per cwt.

ES —The markets have continued very firm and dearer, which lemand. Linseed cakes, 95% pure, £8. 5s. to £8. 7s. 6d. Oilcakes (linseed), £7. 5s to £7. 7s 6d; Russians, 6d. to £7. 17s. 6d. Cotton cakes, best makes, £4. 10s. 11s. 3d.; seconds, £4. 5s. to £4. 7s. 6d.; decorticated, d. to £6. 10s. Rape cakes, Black Sea, £4. 7s 6d.

TS.—The demand continues very fair for time of year, with tion in prices, which range almost any price, according to emand.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

sequence of recent advances in the price of refined petroleum ed from America and Russia, the actual value of the Scotch mineral oils (burning) may now be put higher. That is to say, that any new purchases from makers would now cost more; but seeing that the practice of the trade is to contract forward over the whole of the season, the effect of the advance will, in the meantime, be but limited. Makers are about fully sold forward and have therefore but little more to dispose of; while the buyers for their part are supplied forward at the old price and have not to face any advance till the beginning of next (1899) season. Sulphate of ammonia has gained a little with the closing in of the month, and f o b. Leith has been done up to about £9. 12s. 6d. again. Being now into a new month, the tendency is not unlikely to be rather downward once more. Ordinary chemicals quiet and unchanged.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 12s. 6d, 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d, and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. od.; borax, English refined, £13. 10s, and boracic acid, £25 nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d, and 1-cwt. casks, £6. 15s. nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3¾d, less 5% Liverpool; nitrate of soda, 7s. 7½d. to 7s. 9d; sulphate of ammonia, £9. 10s. od. to £9. 12s. 6d prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port; sulphate of copper, £17. 5s to £17. 7s. 6d., less 5% Liverpool; paraffin scale, hard, 1 3/8d. to 1½d. per lb., and soft 1¾d. per lb.; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning), No. 1, 6½d. and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6 5s. to £6 15s. Week's imports of sugar at Greenock were 2,032 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemial trade is still very quiet, and prices vary considerably with destination. Soda crystals are in fair demand at £2. 12s. 6d. per ton, gross weight, locally. Sulphur is firm at £4. 15s. per ton. Other products unaltered.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 5s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett: white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett: pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt continues in good demand at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The market remains fairly steady and there is now a full demand for gas and household coals. Coke is quiet for export, but prices continue firm, owing to increased demand for local consumption. To-day's quotations are:—Best Northumbrian steam, 9s. 6d. to 10s. od. per ton; second qualities, 8s. 6d. to 9s per ton; small steam, 5s. 9d. to 6s. per ton; bunker coals, 8s. 3d. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 17s to 21s. per ton.

New Companies.

Northern Oxide Co., Ltd.—CAPITAL £1,200. in £1. shares. This company has been formed to carry on business of manufacturers of oxide of iron, colours and other products. Table A. mainly applies. Registered by Oswald & Son, Edinburgh

Electro-Chemical Co., Ltd.—CAPITAL £10,000. in £50. shares. This company has been formed to win, get, reduce, dress, refine, and prepare for market ore and other mineral substances and precious stones. The number of directors is not to be less than 3 nor more than 7; the first are J. C. Horsfall, T. Priestley, and I. Smith. Qualification £250; remuneration as fixed by the company. Registered office, 1, Bradford Exchange, Bradford.

Edinburgh Ice and Cold Storage Co., Ltd.—CAPITAL £20,000. in £2. shares. This company has been formed to establish and promote in Edinburgh and elsewhere in the United Kingdom cold storage

warehouses, ice-making and preserving factories, stores, and agencies. The subscribers to the memorandum of association are :—B. Hogg, 3, Drumsheugh Place, Edinburgh, butcher ; W. Arthur, 193, Bruntsfield-place, Edinburgh, butcher ; M. Brechin, Dalkeith road, Edinburgh, butcher ; T. Fisher, 16, Rillbank Terrace, Edinburgh, butcher ; R. Shaw, 10, Gilmore Place, Edinburgh, butcher ; G. Wood, 50, Hanover-street, Edinburgh, butcher ; G. Whigham, 23, Albany-street, Edinburgh, solicitor.

Gazette Notices.

PARTNERSHIP DISSOLVED.

F. Oliver, J. F. Charnley and W. Harwood, soap manufacturers, Blackburn, under the style of Charnley, Oliver, and Harwood, so far as regards F. Oliver.

IMPORTS OF CHEMICAL PRODUCTS OF THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending October 22nd.

Acetic Acid—

Belgium,	10 pks.	Leach & Co.
Germany,	15	Phillips & Graves
Holland,	90	,,
,,	71	A. & M. Zimmerman
,,	152	R. W. Greeff & Co.

Acetone—

Germany,	15 dms.	Thames S. T. & L. Co., Ld.
Belgium,	2	E. Catlin

Alkali—

Canada,	58 cs.	J. Barber & Co.
France,	55	
,,	136	J. Harrison

Alumite—

Sydney,	£665	J. Allen & Co.

Ammonia—

Holland,	£38	H. Lorenz
,,	22	Howards & Son

Antimony Ore—

Holland,	20 t.	Novelli & Co.

Arsenic—

Germany,	£100	J. Barber & Co.
France,	19	J. Harrison

Asbestos—

Italy,	£210	Bender & Martiny
,,	462	Cape Asbestos Co., Ld.
,,	200	Pickford & Co.
Germany,	35	Craven & Co.
U. States,	40	W. Byford
Holland,	7	T. H. Lee
Italy,	40	Gerard Freres
,,	138	British Asbestos Co.
,,	70	Dick's Asbestos Co.

Barium Chlorate—

Sweden,	£60	G. Boor & Co.

Barytes—

Germany,	48 pks.	J. L. Lyon & Co.
,,	38	Burrel & Co.
Holland,	2	J. Owen
,,	115	W. Harrison & Co.

Bleaching Powder—

Holland	£75	J. M. Steel & Co.

Bleaching Soda—

Germany,	£21	H. Lambert

Bone Ash—

Argentine,	1,013 t.	Anglo-Contl. Guano Wks.

Bone Meal—

E. Indies,	200 t.	Walker, Howard & Co.

Bones—

Sydney,	12 t.	Hicks, Nash & Co.
Melbourne,	10	Culverwell, Brooks & Co.

Caoutchouc—

Straits,	760 c.	L. & I. D. Jt. Co.
Zanzibar,	1	,,
Rangoon,	313	,,
U. States,	2	Lewis & Peat
Melbourne,	234	D. Baird & Co.
U. States,	20	Prop. Bull Wf.
Straits,	500	Soundy & Sons
France,	24	L. & I. D. Jt. Co.

Castor Oil—

E. Indies,	45 cks.	J. W. Cook & Co., Ld.
France,	25 brls.	Lucas & Spencer's Wf.
,,	76	Mordaunt Brs.
,,	20 cks.	L. & I. D. Jt. Co.
Italy,	3 cs.	Potter & Clarke
,,	10	Hewlett & Son
,,	63	Lucas & Spencer's Wf.
,,	10	Major & Field
,,	20	J. A. Fergusson

Caustic Potash—

France,	10 dms.	Petri Brs.
,,	26	W. E. Cole
,,	8	J. A. Reid

Chalk—

Italy,	£230	W. Harrison & Co.
Germany,	25	Butler's Wf., Ld.
Belgium	2	John Cockerill Line

Chemicals (*otherwise undescribed*)

Belgium,	£258	T. H. Lee
,,	93	John Cockerill Line
,,	60	T. Ronald, Son & Co.
Germany,	7	W. J. Crook
,,	853	A. & M. Zimmermann
,,	8	R. W. Greeff & Co.
,,	24	Butler's Wf., Ld.
France,	75	Mory & Co.
,,	16	Sawyer, Sons & Co
Belgium,	80	B. & F. Wf. Co.
Holland,	3	Petri Brs.
,,	15	R. W. Greeff & Co.
Germany,	15	L. & I. D. Jt. Co.
,,	11	R. W. Greeff & Co.
Melbourne,	470	L. & I. D. Jt. Co.
Sydney,	180	,,
Belgium,	9	T. Palmer
France,	17	Prop. Hay's Wf.
Holland,	93	T. H. Lee
,,	4	J. Owen
,,	25	Hemu. Peron & Co
Germany,	25	Phillipps & Graves

Cream of Tartar—

Spain,	25 pks.	J. Owen
France,	2	M. Ashby, Ld.
,,	33	W. C. Bacon & Co.
,,	5	B. & F. Wf. Co.
Portugal,	10	,,
Germany,	20	Argo S. S. Co.
France,	2	H Johnson & Sons
,,	5	C. Atkins & Nisbet
,,	4	Blackmore, Leconte & Co.
,,	5	F. C. Devon & Co.

Creosote—

Belgium,	£122	E. Catlin

Dyestuffs—

Aniline

France,	2 pks.	L. C. & D. Rly. Co.
Holland,	1	Pickford & Co.

Anthracene

Belgium,	184 pks.	Burt, Boulton & Co.

Argols

Italy,	74 pks.	Thames S. T. & L. Co.

Cochineal

Canaries,	6 pks.	L. & I. D. Jt. Co

Cutch

Rangoon,	200 pks.	A. Howden & Co.
Straits,	22	Prop. Hay's Wf.

Extracts

Holland,	21 pks.	J. Norrenberg & Co.
,,	21	Prprs. Dowgate Dk.
France,	34	Leach & Co.
,,	50	L. J. Levinstein & Sons

Fustic

B. W. I.,	1 t.	L. & I. D. Jt. Co.

Gambier

Straits,	512 pks.	Adamson, Gilfillan & Co.
,,	504	P. & O. Co.

Logwood

B. H'nd'ras,	338 t.	W. Shelcott

Orchella

Portugal,	27 pks.	Prop. Bull Wf.

Shumac

Italy,	1,000 pks.	J. Kitchin, Ld.
,,	100	T. Harris & Co.
,,	68	R. Waters
,,	200	Colthurst & Harding

Tanners' Bark

Natal,	45 t.	A. & W. Nesbitt
Adelaide,	64	Baxter & Hoare
,,	17	Hore & Scrivner
New York,	23	Beresford & Co.
Melbourne,	25	J. Allen & Co.
,,	25	L. & I. D. Jt. Co.

Turmeric

E. Indies,	100 pks.	H. Devitt & Co.

Dyestuffs (*otherwise undes.*)—

U. States,	123 pks.	L. & I. D. Jt. Co.

Farina—

Germany,	20 pks.	Seaward Brs., Ld.
France,	2	H. Ewald & Co.
,,	2	E. Flageollet & Co.
Holland,	25	J. Barber & Co.
Germany,	50	J. Knill & Co.

Glucose—

Germany,	100 pks.	120 cwt.	Trier, Meyer & Co.
U. States,	3,516	12,319	R. G. Hall
,,	250	1,392	Ohlenschlager Brs.
,,	750	2,080	Fellows, Morton & Co.
,,	50	300	A. B. Curtis & Co.
,,	2,000	2,000	Pearce, Pelly, & Co.
,,	100	580	L. Norman & Co.
,,	100	627	H. Johnson & Sons
,,	100	581	J. Keiller & Son, Ld.
,,	100	600	Page, Son & East
,,	1,000	1,000	E. Thompson & Co.
,,	70	402	A. E. Piggott
,,	150	1,390	Lon. & Til. Ltge. C. & D. Co.
France,	200	200	L. Norman & Co.
Germany,	100	100	J. Barber & Co
France,	340	340	W. E. Cole
,,	140	140	C. Baman
U. States,	650	650	Pearce, Pelly & Co.
,,	500	500	Trier, Meyer & Co.

Glue—

Germany,	£30	L. & I. D. Jt Co.
U. States,	50	London Parcels Del. Co.
,,	215	H. Grey, Jr.
Italy,	402	J. Barber & Co
France,	24	Mory & Co.
,,	47	Burnett Brs. & Sons
Germany,	86	Phillipps & Graves
Holland,	24	,,
,,	13	Hemu. Peron & Co.
France,	11	E. Flageollet & Co.
Belgium,	25	J. E. Kitton
,,	120	Anglo-Am. Oil Co.
Germany,	238	W. W. Jones & Co.
,,	46	M. Dk. Co.
Italy,	160	Sander & Knott
Austria,	260	Bennett S. S. Co.
Germany,	12	Home and Cont. Trading Co.
Belgium,	1,244	R. G. Hall & Co.

Glue Stock—

Germany,	52 sks.	Elkan & Co.
,,	56 bls.	Hicks, Nash, & Co.
,,	60	L. & I. D. Jt Co.
Sydney,	59	T. J. & T. Powell

Glycerine—

Holland,	£450	J. Barber & Co.
Germany,	35	F. Bochin

Guano—

Uruguay,	500 t.	Anglo-Cont. Guano Works

Infusorial Earth—

Germany,	£35	Wilson & Co.

Kainit—

Germany,	400 t.	F. W. Berk & Co., Ld.

Lead Acetate—

Victoria	£19	T. Hamilton & Co.

Litharge—

Germany,	2 pks.	H. Lambert
,,	4	Butler's Wf., Ld.
Holland,	4	J. Owen

Manganese Ore—

Germany,	1 t.	Butler's Wf., Ld.

Manure—

Uruguay,	5 t.	Anglo-Contl. Guano Works
Argentine,	36	,,

Methyl Alcohol—

Belgium,	12 dms.	Stein Brs.
France,	20 cks.	E. Catlin

Mica—

E. Indies,	£50	W. M. Smith & Sons

Molasses—

U. States,	251 cks.	1,437 c.	M. Dk. Co.
,,	302	1,691	Falkenberg & Hesse
,,	200	1,220	R. G. Hall & Co.
,,	188	1,096	J. Fersey
,,	350	1 975	J. W. Cook & Co., Ld.

Ochre—

Italy,	11 pks.	Wilson & Co.
Spain,	25	Brasch & Rothenstein
,,	25	W. Balchin, Ld.
Holland,	4	Phillipps & Graves

Paraffin Scale—

U. States,	1,668 brls.	Anglo-American Oil Co.

Paraffin Wax—

U. States,	325 brls.	H. Hill & Sons
Rangoon,	1,582 bxs.	,,

Phosphates—

Holland,	£107	A. G. Robinson & Co.
Belgium,	415	West & Penrose

Pitch—

N. Russia,	550 cks.	J. Batson & Co., Ld.
Germany,	75 brls.	Malcolm & Co.

Platina Ore—

Russia,	2½ c.	H. Grey, junr.

Plumbago—

Germany,	8 cks.	R. Galloway
,,	15 pks.	Butler's Wf., Ld.
,,	27 cks.	H. Lambert
,,	37	B. Gallaway
,,	8	Beck & Pollitzer
Ceylon,	707	Morgan Crucible Co.
Italy,	180 brls.	J. Thredder, Son, & Co.
U. States,	56 pks.	Lunham & Moore

Potassium Bicarbonate—

Holland,	£60	A. & M. Zimmerman

Potassium Bromide—

Germany,	£22	R. W. Greeff & Co.

Potassium Carbonate—

France,	140 c.	Petri Brs.
,,	130	J. A. Reid
Germany,	500	Charles & Fox
,,	40	M. Dk. Co.
,,	100	A. & M. Zimmermann
Canada,	53	Charles & Fox

Potassium Chlorate—

Belgium,	£37	J. W. Drysdale & Co.

Potassium Chloride—

Germany,	500 bgs.	Bessler, Waechter, & Co.

Potassium Oxychloride—

Sweden,	100 kgs.	G. Boor & Co.

Potassium Permanganate—

Holland,	£15	R. W. Greeff & Co.

Pyridine—

Belgium,	42 pks.	Burt, Boulton, & Co., Ld.

Rosin—

U. States,	500 brls.	Moore & Hole
,,	1,500	T. Nickels & C

Salicylic Acid—
Germany, 2 pks. Butler's Wf., Ld.
Sheep Dip—
Melbourne, 491 cks. Odams Chemical Manure Co.
Slag—
Belgium, 99 t. Lawes Chemical Manure Co.
Soap—
Italy, £21 Chesapeake & Ohio S. S. Co.
Holland, 56 Phillipps & Graves
U. States, 291 Lunham & Moore
" 520 W. Dixon
France, 31 Paton & Challes
" 34 Skilbeck Brs.
Starch—
Belgium, 200 pks. T. Ronaldson & Co.
" 70 Beck & Pollitzer
" 137 Leach & Co.
" 56 F. Claydon & Co.
" 80 C. Tennant. Sons, & Co.
Canada, 100 "
Holland, 250 E. Olyett & Sons
" 75 Phillipps & Graves
" 1,742 Little & Johnston
U. States, 200 Ohlenschlager Brs.
" 250 L. & I. D. Jt. Co.
" 1,400 Union Ltge. Co., Ld.
" 450 Beck & Pollitzer
France, 40 Carey & Sons
" 20 W. E. Cole
Germany, 120 Phillipps & Graves
" 660 Horne & Co.
" 100 Seaward Brs., Ld.
Stearine—
Holland, 67 cks. J. Owen
" 25 T. H. Lee
" 68 H. Hill & Sons
" 17 W. Von Bomberg
France, 100 H. Hill & Sons
Belgium, 380 "
" 63 W. H. Mitchell
Siberia, 1 L. & I. D. Jt. Co.
Sulphur—
Italy, 61 t. G. Boor & Co.
" 19 F. Smith
" 15 Laughland, Mackay, & Co.
" 21 J. Greig
" 20 Charles & Fox
" 5 A. F. White & Co.
" 10 Copes & Self
" 10 Hyslop & Symonds
" 9 F. C. Devon & Co.
" 100 W. C. Bacon & Co.
" 50 Johnson & Hooper
" 200 B. Jacob & Sons
U. States, 15 Hicks, Nash, & Co.
Talc—
France, £40 Blackwell & Co.
Ceylon, 70 W. M. Smith & Sons
E. Indies, 1,405 "
" 1,235 E. Davies & Co.
U. States, 45 W. M. Smith & Sons
Tannic Acid—
Germany, 7 pks. R. W. Greeff & Co.
Tar—
Jersey, 588 brls. Burt, Boulton, & Co.
Tartar—
Italy, 17 pks. B. Jacob & Sons
Tartaric Acid—
Holland, 20 pks. Kirkpatrick, Barr, & Co.
Belgium, 4 F. C. Devon & Co.
Turpentine—
U. States, 103,819 gls. H. Funck & Co.
Ultramarine—
Holland, 20 pks. Thames S. T. & L. Co., Ld.
" 10 Hernu, Peron, & Co.
" 4 W. Harrison & Co.
Varnish—
Belgium, 10 pks. T. H. Lee
U. States, 5 Blundell, Spence, & Co.
White Lead—
Holland, 25 pks. Wilkinson, Heywood, & Co.
" 50 Randall Brs.
" 21 Perkins & Homer
" 39 Burrell & Co.
" 77 W. Balchin, Ld.
" 62 D. Storer & Sons
Belgium, 45 T. & W. Farmiloe, Ld.
" 29 J. L. Lyon & Co.
" 23 J. W. Cook & Co., Ld.
Germany, 4 Butler's Wf., Ld.
" 32 Taylor Brs.

Wood Pulp—
Sweden, 14 pks. Thames S. T. & L. Co., Ld.
" 250 Raby & Mather
" 3,521 W. G. Taylor & Co., Ld.
Norway, 800 London Paper Mills Co.
" 3,154 Johnsen & Jorgensen
" 3,505 E. J. & W. Goldsmith
" 400 Tough & Henderson
Holland, 57 Vokins & Co. Ld.
Canada, 1,261 Becker & Co.
Zinc Oxide—
Germany, 30 pks. M. Ashby, Ld.
" 500 Soundy & Sons
Holland, 105 M. Ashby, Ld.
U States, 16 L & I. D. Jt. Co.
" 300 M Ashby. Ld.
Belgium, 3 Hewlett & Son

LIVERPOOL.

Week ending October 20th.

Acetate of Lime—
New York, 4,276 bgs.
Aluminium—
New York, 6 bxs. T Ashbury
Antimony—
Valparaiso, 60 sks. Kleinwort, Sons & Co.
Bone Ash—
Rio de Janeiro, 3 brls. A. Perdorff & Co
Bone Meal—
River Plate, 674 bgs. V. Picasso
Bones—
B. Ayres, 11,400 kilos W. B. Dickinson
Borate—
Valparaiso, 1,750 sks.
Caoutchouc—
Valparaiso, 260 cs. J. H. Schroder
Havre, 8 cks. Cunard S. S. Co.
Colours—
Stettin, 20 cks. Clayton & Jowett
" 12 Calvert Brs. & Co.
Cottonseed Oil—
New York, 293 brls.
Cream of Tartar—
Bordeaux, 144 cks.
Dyestuffs—
Annatto
Bordeaux, 5 cks.
Extracts
Philadelphia, 100 bxs. 15 brls.
Bordeaux, 32 cks.
Fiume, 458
Dyestuffs *(otherwise undes.)*—
N'port News, 2,000 bgs.
Farina—
Fiume, 100 bgs.
Glucose—
Boston, 1,999 brls. T. M. Duche & Son
" 700
Baltimore, 250
Ochre—
Alicante, 100 bgs.
New York, 20 brls. Harffne Hilpart
Paint—
Boston, 40 cs. M. Nicol & Co.
" 10 Leech & Co.
New York, 17 pks. Sewell & Crowther
Potash—
New York, 20 cks.
Pyrites—
Huelva, 1,766 t. F. C. Hills & Co.
Soap—
Boston, 21 cs.
" 6 Barclay & Sons
New York, 1,075 bxs. B. T. Rabbitt
Soap Lye—
Santander, 20 brls.
Sodium Nitrate—
Calita Bu., 14,099 bgs.
Starch—
Bremen, 87 cs.
Boston, 300 bgs.
Newport News, 400 sks.
Tallow—
River Plate, 62 cks., 114 hf. pps.
" 117 341 pps. River Plate F. Meat Co.
Boston, 75 tcs. Lowell Rendering Co.
" 730 216 brls.
New York, 125 320
Montreal, 566
Wood Pulp—
Boston, 330 bdls. Spicer Brs. Ld.
Zinc Skimmings—
Boston, 29 brls.

MANCHESTER.

Week ending October 22nd.

Alizarine—
Rotterdam, 31 cks. 25 brls.
Ammonium Chloride—
Rotterdam. 5 cks
Aniline Salts—
Rotterdam, 2 cks.
Antimony Salts—
Hamburg, 7 cks.
Asbestos—
Rotterdam, 7 crts.
Barytes—
Antwerp, 100 bgs.
Hamburg, 26 cks.
Rotterdam, 22
Castor Oil—
Antwerp, 78 brls.
Cement—
Antwerp, 1,171 bgs.
Ghent, 1,000
Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck.
Colours—
Ghent, 2 brls.
Hamburg, 5 cks. 3 cs.
Rotterdam, 16 9 44 brls.
Dyestuffs *(otherwise undescribed*
Antwerp, 6 brls.
Extracts—
New York, 10 brls.
Rotterdam, 17 cks
Farina—
Hamburg, 25 bgs.
Gelatine—
Hamburg, 5 cs.
Glucose—
Montreal, 400 brls.
Glue—
Antwerp, 3 cks 62 bls.
Hamburg, 2 bgs.
Rotterdam, 100
Treport, 20
Indigo—
Rotterdam, 7 chts. 4 cs. 2 brls.
Lead Acetate—
Rotterdam, 14 cks.
Limestone—
Antwerp, 5 cs.
Mineral White—
Bordeaux, 20 bgs. G. G. Blackwell, Sons, & Co.
Ochre—
Hamburg, 13 cks.
Phosphorus—
New York, 40 cs.
Pitch—
Hamburg, 50 cks.
Potash—
Rotterdam, 24 cks.
Saltpetre—
Hamburg, 5 cks.
Soap—
Rotterdam, 1 cs.
Soda—
Hamburg, 1 cs.
Sodium Acetate—
Treport, 30 cks.
Sodium Nitrate—
Rotterdam, 27 cks.
Starch—
Montreal, 100 bgs. 2,800 sks.
New York, 1,802
Rotterdam, 142 cs.
Tallow—
New York, 50 hds.
Tartaric Acid—
Rotterdam, 20 kgs.
Tar Waste—
Rotterdam, 6 cks.
Ultramarine—
Hamburg, 10 cs.
Rotterdam, 4 cks.
Waste Salt—
Hamburg, qty.
White Lead—
Rotterdam, 8 cks
Wood Pulp—
Gothenburg, 26 rolls 1,649 bls.
Hamburg, 400
New York, 150
Zinc Oxide—
Antwerp, 20 cks.
New York, 100 brls.

HULL.

Week ending October 22n

Aniline Colours—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
3 cs.
Antimony—
Leghorn, 4 cks. Wilson, Sons, & Co., Ld.
Barytes—
Bremen, 123 pks.
Rotterdam, 50 bgs. Wilson, Sons, & Co., Ld.
Castor Oil—
Marseilles, 40 brls. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Antwerp, 5 cs. Wilson, Sons, & Co., Ld.
Ghent, 15 crbys. "
Hamburg, 3 cks. "
Leghorn, 2 "
New York, 1 dm. "
Stettin, 30 cks. "
Colours—
Amsterdam, 1 ck. Hull & Netherlands S. S. Co.
Antwerp, 55 brls. 35 pks. 19 cks. Wilson, Sons, & Co., Ld.
Hamburg, 20 Sissons Brs. & Co.
Rotterdam, 46 18 cs. 19 bxs. 147 pks, 152 brls. Hull & Netherlands S. S. Co.
Cottonseed Oil—
New York, 50 brls. Wilson, Sons, & Co., Ld.
" 1
Cream of Tartar—
Rotterdam, 2 cks. Hull & Netherlands S. S Co.
Cryolite—
Copenhagen, 4 cks. Wilson Sons, & Co., Ld.
Dextrine—
Stettin, 12 bgs. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 9 cks. Hull & Netherlands S. S. Co.
Glucose—
New York, 25 brls. Wilson, Sons, & Co., Ld.
" 650
Glue—
Philadelphia, 10 brls.
Rotterdam, 15 bgs. Hull & Netherlands S. S. Co.
Rouen, 64 cks. Rawson & 10 bls. Robinson
Ochre—
Rotterdam, 2 brls. Hull & Netherlands S. S. Co.
1 bx.
Paint—
Philadelphia, 35 brls.
Stockholm, 1 cs. Wilson, Sons, & Co., Ld.
Phosphates—
Ghent, 160 t. Wilson, Sons, & Co., Ld.
Pitch—
Copenhagen, 42 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 88 cks. Hull & Netherlands S. S. Co.
Plumbago—
Leghorn, 250 bgs.
Potash—
Dunkirk, 10 dms. Wilson, Sons, & Co., Ld.
Pumice Stone—
Leghorn, 1 ble.

Saltpetre—
Hamburg, 10 kgs. Wilson, Sons, & Co., Ld.

Soda—
Ghent, 200 bgs. Wilson, Sons, & Co., Ld.

Sodium Silicate—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Starch—
Amsterdam, 20 bgs. Hull & Netherlands S. S. Co.
Bremen, 1,354 pks. 3,369 cs. Veltmann & Co.
New York, 100 bgs.

Stearine—
New York, 5 brls. Wilson, Sons, & Co., Ld.

Talc—
Leghorn, 5 bls.

Tallow—
Antwerp, 6 brls. Wilson, Sons, & Co., Ld.
Boston, 30 tcs. "
Dunkirk, 286 cks. "
New York, 126 brls. "
Rouen, 66 bgs. Rawson & Robinson

Tar—
Konigsberg, 30 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.

Turpentine—
Boulogne, 5 cks. 1 cs.

Ultramarine—
Bremen, 10 cks.
Rotterdam, 4 Hull & Netherlands S. S. Co.

Waste Salt—
Hamburg, 100 bgs. Bailey & Leetham, Ld

White Lead—
Rotterdam, 33 cks. Hull & Netherlands S. S. Co.

Wood Pulp—
Boston, 188 bdls. Wilson, Sons, & Co., Ld.
Hamburg, 38 bls. "
Helsingfors, 60 J. Good & Sons

Zinc Oxide—
Antwerp, 4 cks. Bailey & Leetham, Ld.

GLASGOW.

Week ending October 27th.

Acetic Acid—
Rotterdam, 10 carbys 1 cs. J. Rankine & Son

Alumina Sulphate—
Rotterdam, 100 bgs. J. Rankine & Son
" 90 cks.

Ammonium Nitrate—
Rotterdam 34 cks. J. Rankine & Son

Ammonium Sulphate—
Bordeaux, 1 bg.

Aniline Salts—
Rotterdam, 24 cks.

Antimony Sulphide—
Hamburg, 1 ck.

Arachide Oil—
Rotterdam, 1 ck.

Asbestos—
Genoa, 20 pks.

Barytes—
Hamburg, 90 bgs.
Rotterdam, 86 cks. J. Rankine & Son

Bleaching Powder—
Rotterdam, 22 cks. J. Rankine & Son

Castor Oil—
Antwerp, 1,112 cks.

Colours—
Rotterdam, 2 cks. 4 bxs. J. Rankine & Son
Antwerp, 1 ck.

Cottonseed Oil—
New York, 180 brls.

Cream of Tartar—
Bordeaux, 3 cks.

Dyestuffs—
Alizarine
Rotterdam, 13 cks. 1 brl. 1 cs. J. Rankine & Son

Aniline
Rotterdam, 6 cks. 8 cs. J. Rankine & Son

Aniline Colours
Hamburg, 1 ck.

Shumac
Palermo, 420 bgs.

Farina—
Hamburg, 55 bgs.

French Chalk—
Fiume, 10 bgs.

Gelatine—
Hamburg, 15 cs.

Glucose—
Boston, 150 brls.

Glue—
Rotterdam, 60 bgs. J. Rankine
" 60
Fiume, 100

Iron Oxide—
Montreal, 87 brls.

Manganese—
Hamburg, 1 ck.

Molasses—
New York, 250 brls.

Ochre—
Rotterdam, 15 cks. J. Rankine & Son

Paint—
Hamburg, 20 dms.

Painters' Colours—
Antwerp, 3 cs.
Hamburg, 1

Paraffin Scale—
Philadelphia, 100 brls.

Plumbago—
Genoa, 200 bgs.

Potash—
Rotterdam, 35 cks. J. Rankine & Son

Saltpetre—
Hamburg, 3 cks.

Soap—
New York, 2,575 bxs.
Fiume, 15 cs. Rowley & Dick
" 27 G. & J. Boyd
" 84 Busban Brs. & McIntyre
" 20
Genoa, 15

Starch—
Fiume, 40 bgs.
Montreal, 250

Stearine—
Philadelphia, 110 tcs.

Sulphur—
Catania, 120 t. Thomas Lawrie
" 101 brls.

White Lead—
Rotterdam, 52 pks.

Wood Pulp—
Montreal, 400 bls.

Zinc Oxide—
Rotterdam, 25 cks. J. Rankine & Son
Antwerp, 1

Zinc White—
Rotterdam, 50 cks. J. Rankine & Son
" 25 pks.

TYNE.

Week ending October 22nd.

Antimony—
Hamburg, 100 cs. Tyne S. S. Co.

Antimony Ore—
Tampico, 344 sks. Cookson & Co.

Asbestos—
Hamburg, 2 bls. Tyne S. S. Co.

Castor Oil—
Antwerp, 30 brls. Tyne S. S. Co.

Chemicals (*otherwise unaescribea*)
Hamburg, 300 t. Clephans & Wiencke

Colours—
Antwerp. 3 cks. Tyne S. S. Co.

Sodium Manganate—
Rotterdam, 1 ck. Tyne S. S. Co.

Sodium Nitrate—
Tal Tal, Chili, 11,250 bgs. J. Cameron, Swan, & Co.

Starch—
Rotterdam, 172 cs. Tyne S. S. Co.

White Lead—
Antwerp, 20 cks. Tyne S. S. Co.

Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending October 19th.

Acetic Acid—
Hamburg, 1 ck.

Alizarine—
Rotterdam, 91 cks. 2 cs.

Alkali—
Calais, 17 cks.

Alumina Sulphate—
Rotterdam, 13 cks.

Aniline—
Rotterdam, 287 cks. 38 cs.

Antimony—
Boulogne, 1 ck.

Antimony Sulphide—
Boulogne, 10 cks.

Caoutchouc—
Boulogne, 2 bs. 1 cs.

Chemicals (*otherwise undescribed*)
Hamburg, 5 cks. 13 cs.

Colours—
Hamburg, 24 cks. 11 cs.

Dyestuffs (*otherwise unaescribed*)
Amsterdam, 3 cks.
Antwerp, 301 bgs.
Boulogne, 47 cks. 1 cs. 49 pks.
Rotterdam, 43 20

Extracts—
Hamburg, 45 bgs.

Farina—
Hamburg, 100 bgs.

Glucose—
Calais, 100 bgs.

Glue—
Hamburg, 11 cks. 10 bgs.

Logwood—
Hayti, 440 t.

Phosphates—
Calais, 1,530 bgs.

Potash—
Calais, 8 dms.
Dunkirk, 3 cks. 40

Saltpetre—
Hamburg, 52 cks.
Rotterdam, 200 bgs.

Starch—
Ghent, 52 bxs.

Tartar—
Antwerp, 1 ck.
Hamburg, 5

Varnish—
Boulogne, 10 cks.
Hamburg, 1 pk

Waste Salt—
Hamburg, 420 t. 508 cks. 500 bgs.

GRIMSBY.

Week ending October 22nd.

Caoutchouc—
Antwerp, 10 cs.

Chemicals (*otherwise undescribed*)
Hamburg, 5 cks. 4 cs.

Colours—
Antwerp, 8 cks. 66 pks.
Hamburg, 40 15 cs. 2 bs. 249
Rotterdam, 20 bgs. 4 cks.

Farina—
Hamburg, 70 bgs.

Varnish—
Antwerp, 4 cs.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 26th.

Acids—
Sydney, 4 cs £11
Brisbane, 4 29

Alkali—
Madras, 1 t. £9
Lyttelton, 2 10 c. 14

Ammonia—
Barcelona, 10 c. £19

Ammonium Carbonate—
Cape Town, 5 cs. £11
Stettin, 3 t. 3 c. 77
Cologne, 2 12 65
Paris, 2 11 70
Stockholm, 15 21

Ammonium Chloride—
Christiania, 1 t. 18 c £45
Shanghai, 3 11 130
Constantinople, 1 29
Salonica, 14 cks. 70
Cologne, 8 38

Ammonium Sulphate—
Bremen, 50 t. £475
Hamburg, 50 9 c. 480
Dunkirk, 150 1,463

Arsenic—
Yokohama, 40 kgs. £34
Invercargill, 2 t. 13 c. 43
Brisbane, 1 17
Hiogo, 1 18
Napier, 10 178

Bleaching Powder—
E. London, 10 c. £5

Boracic Acid—
Wellington, 1 t. £35
Auckland, 2 10 c. 63

Borax—
Montreal, 1 ck. £12
Antwerp, 3 cs. 10
Durban, 11 c. 12

Caustic Soda—
Pt. Chalmers, 1 t. £16
E. London, 14 c. 18
Napier, 5 7 53
Durban, 5 5 29
Auckland, 40 dms. —

Chemicals (*otherwise undescribed*)
St. Petersburg, 30 kgs. £175
Rotterdam, 2 14
Auckland, 29 pks. 4 cs. (pt.) 124
Durban, 8 13 pks. 118
Oporto, 6 17
Bombay, 4 cks. 5 21 95
Hamburg, 95 26 482
Ghent, 1 brl. 13
Cologne, 10 10 kgs. 75
Hong Kong, 12 cs. (pt.). 10
Dunkirk, 15 cks. 230
Montreal, 8 pks. 90
Madras, 2 cs. 8
Perth, 133 pks. (pt.) 110
Sydney, 35 cs. 326
Havre, 3 12
Canterbury, 2 12
Paris, 1 ck. 10
Jamaica, 2
Calcutta, 13
Brisbane, 86 pks. (pt.)
Shanghai, 5 cs.
Lyttelton, 2 cks.
Genoa, 20 kgs.
Pt. Elizabeth, 1 45

Citric Acid—
Genoa, 5 c.
Barcelona, 1 t.
Nelson, 1
Libau, 5
Dunedin, 1
Tangiers, 1
Bombay, 1 cs.

Coal Products—
Alizarine
Dunedin, 4 pks.

Aniline
Dunedin, 1 cs.
Calcutta, 1 ck, 1

Anthracene
Dusseldorf, 259 cks.

...zine
...rbury, 20 dms. £6
...nzol
...ort, 30 cks. £55
...hama, 9 cs. 24
...rbolic Acid
...real, 20 cks. £63
...eldorf, 80 600
...Hong, 50 dms. 13
...gne, 49 brls. 193
8 cs. 16
...tantinople, 4 17
...antle, 2 7
...as, 20 10
...eosote
...York, 500 cks. £340
...port News, 500 340
...eosote Oil
...port News, 500 cks. £495
...phtha
...ourne, 50 dms. £21
...phthaline
...gne, 11 cks. £96
...e, 1 11
...eldorf, 500 bgs. 244
...York, 100 56
...ch
...goon, 20 kgs. £5
...antle, 20 frkns. 6
...cholm, 50 cks. 29
...on, 700 200
...burg, 100 16 brls. 280
...edin, 2 6
...treal, 117 65
...York, 100 55
...verp, 1,480 t. 1,544
...kirk, 150 210
...mo, 280 —
...a, 30 8
...ourne, 20 13
...ridine Bases
...gne, 24 cks. £280
...r
...goa Bay, 100 dms. £7
...an, 40 8
...antle, 3 brls. 30 10
...cholm, 50 cks. 30
...ney 300 56
...erdam, 25 80
...burg, 100 200 143
...mo, 1,000 —
...ourne, 5 21
...er Sulphate—
...eaux, 15 t. £249
...n of Tartar—
...edin, 2 t. £149
...ington, 1 76
...antle, 10 c. 38
...laberg, 10 37
...orne, 4 18
...fectants—
...Chalmers, 11 cs. £68
...utta, 169 pks. 38
...mbo, 14 22
...gua, 6 14
...bane, 22 14
...ington, 33 86
...ng, 55 85
...treal, 5 17
...ban, 104 54
...ra<, 55 cks. 110 dms 55
..., 35 45
...en, 20 11
...ney, 8 22
...rine—
... York, 40 t. 19 c. £1,150
...re—
...aica, 2 t. 7 c. £21
...erara, 2 10 34
...en, 17 10 75
...adelphia, 1 5 22
...re, 25 80
...idad, 100 206
...ourne, 102 2 425
... Town, 516 6 1,935
..., 50 13 125
...bama, 5 2 184
...to d'l' Cruz, 1< 105
...leaux, 18 11 228
...ey, 295 1 1,407
...mbo, 21 10 140
...c Acid—
...utta, 2 t. £72
... Ash—
...elton, 6 c. £7
...sh—
...go, 6 c. £10
...elton, 17 27
...rcargill, 1 t. 13 37
...ssium Chlorate—
...de Janeiro, 1 t. £33
... York, 10 318
...abaya, 10 c 18
...ssium Cyanide—
...nsville, 24 t. 8 c. £2,814

Madras, 3 4 272
Pt. Elizabeth, 10 1,071
Melbourne, 70 cs. 706
Cartagena, 2 cks. 23
Sydney, 75 774

Potassium Prussiate—
New York, 24 cks. £304

Saltpetre—
Brisbane, 10 c. £10
Dunedin, 1 t. 21
Durban, 10 11
Fremantle, 10 10
Melbourne, 1 18 38
M. Video, 14 14
Rio de Janeiro, 15 6 321
Santos, 2 43
Sydney, 2 43
Wellington, 1 21

Sheep Dip—
Invercargill, 30 cks. £128
Brisbane, 10 dms. 10
Cape Town, 250 37
Durban, { 1 t. 3 c. / 150 dms. 58
Pt. Elizabeth, 120 100 cs 193
Napier, 50 43
Zanzibar, 2 8

Soda—
Barbadoes, 1 t. £7
Berbice, 16 c. 5
Madras, 7 6
Montreal, 6 10
Singapore, 1 14 11

Sodium Bicarbonate—
Bundaberg, 1 t. £7
Fremantle, 11 c. 7
Singapore, 3 6

Sodium Nitrate—
Boston, 2 t. 13 c. £45

Sodium Prussiate—
Hamburg, 5 t. £238

Sodium Silicate—
Auckland, 10 cks. £—

Sulphur—
E. London, 2 t. 2 c. £21
Larnaca, 1 1 12

Sulphuric Acid—
Hong Kong, 28 cs. £21
Madras, { 14 / 3 t. 10 c. 32

Tartaric Acid—
E. London, 1 cs. 2 c. £25
Madras, 14 12
Calcutta, 4 25
Wellington, 5 28
Fremantle, 6 31
Boulogne, 5 28
Dunedin, 9 50
Cape Town, 2 12
Brisbane, 2 11
Malta, 2 14
Gisborne, 2 11

LIVERPOOL.

Week ending October 26th.

Acetic Acid –
Copenhagen, 1 t. 5 c. £26

Alkali—
Malaga, 13 t. 13 c. 1 q. £65
Valencia, 54 6 240
Alicante, 12 5 2 50
Barranquilla, 6 5 2 25
Seville, 15 15 65
Montreal, 4 3 3 19
Piræus, 25 2 105
Para, 9 13 3 40
Mauritius, 1 11 3 7
Adelaide, 16 75
Marseilles, 2 9 3 10
Corinto, 5 6 2 23

Alum—
Galatz, 81 12 c. £43
Rangoon, 8 10
Portland, O. 45 225
Pernambuco, 4 18 2 q. 25
Smyrna, 4 20
Windsor, 4 2 22
Oporto, 2 10 13
Melbourne, 1 2 6
Mazagan, 5 11 3 26
Volo, 1 8 2 5
Piræus, 1 2 5
Bourgas, 1 19 9
Constantinople, 15 11 1 70

Aluminous Cake—
Calcutta, 72 t. 13 c. 2 q. £187

Ammonia—
Callao, 6 c. £33

Ammonium Carbonate—
Bremen, 1 t. 6 c. £43
Genoa, 55 kks. 85
Salonica, 5 5
Barcelona, 1 1 30
Marseilles, 1 5 38
Vera Cruz, 7 2 q. 8
Odessa, 18 28
Yokohama, 2 3 10
Hamburg, 2 1 58
Naples, 10 12
Fairwater, 1 28
Havana, 4 2 6
Gothenberg, 3 15 2 105
Bordeaux, 1 25
Santander, 10 15
Copenhagen, 2 2 56
Hiogo, 3 5 80

Ammonium Chloride—
Marseilles, 10 c. £20
Philadelphia, 20 t. 18 2 q. 409
Melbourne, 1 3 17

Ammonium Sulphate—
Gd Canary, 14 t. 5 c. £140
Bordeaux. 10 95
Las Palmas 25 11 255
Teneriffe, 15 150
Barcelona, 9 10 85
Sourabaya. 328 11 1 q. 3 116
Samarang, 56 —
Valencia, 170 16 1,196

Antimony Sulphide—
New York, 12 brls. £60

Arsenic—
Santander. 3 c. 3 q. £5

Basic Slag—
Adelaide, 480 t. £987

Barium Binoxide—
Hiogo, 11 t. 10 c. £55

Bisulphite of Lime—
Rangoon, 6 t. 4 c. £65

Bleaching Powder—
Ancona, 10 cks
Bombay, 8 cs.
Boston, 544
Calcutta, 20
Genoa, 74
Georgetown, On. 46
Montreal, 55
Naples, 35
Newport News, 32
New York, 313
Patras, 5
Philadelphia, 743
Seville, 20
Toronto, 10
Venice, 10
Vera Cruz, 30 20 brls.
St. John's 2 c. 1 q. £3

Boracic Acid—
Pt. Said, 6 c. £7
Adelaide, 10 12
Stamboul, 2 t. 9 1 q. 10

Borax—
Montreal, 1 t. 4 c. £17
Callao, 1 10 22
Hamburg, 10 6 150
Rangoon, 1 15
Adelaide, 12 8
Rotterdam, 1 15
Antwerp, 1 15

Calcium Chloride—
Melbourne, 14 t. 4 c. £76
Calcutta, 4 21
Sydney, 8 15 19

Carbolic Acid—
New York, 11 t. 14 c. 3 q. £118
Rangoon, 4 2 17
Melbourne, 2 10 85
Hamburg, 1 7 84

Caustic Potash—
Hong Kong, 5 c. £9

Caustic Soda—
Alexandria, 30 dms.
Amsterdam. 120
Ancona 20
Antwerp, 91
Asuncion, 36
Bahia. 15
Barcelona, 540 pks.
Bari, 150
Barranquilla 10
Bilbao. 50
Bombay, 70
Boston 50 60 brls.
Bremen, 5
Callao, 300
Ceara. 20
Christiania, 8
Darlington, 59
Fiume, 15
Galatz, 115
Genoa, 225
Galt, 22
Guelp, 15 cs.
Gutujewski, 150
Hamburg, 295
Havre, 25
Hiogo, 532
Ilo Ilo, 25
Las Palmas, 40
Leghorn, 50
Manila, 150
Marseilles, 20
Maricaibo, 10
Mauritius. 10
Melbourne Wf., 40
Messina, 30
Mollendo, 50
Montreal, 215
Naples, 10
Para, 30
Pernambuco, 30
Philadelphia. 50
Piræus, 45 cks.
Quebec. 100
Rangoon, 25
Rio de Janeiro, 20
Rouen, 11
San Francisco, 150
Sydney, 93
Tampico, 100
Toronto, 15
Victoria. 10
Valparaiso, 20
Varna, 25
Venice, 18
Woodstock, 50
Yloilo, 100
Yokohama, 100

Chemicals *(otherwise undescribed)*
Ceara. 4 c. £3
Calcutta, 64½ tcs. 230 brls. 231
Bombay, 100 470
Stettin, 1 ck. 16
Lagos, 1 cs. 12
Odessa, 8 t. 6 c. 1 q. 215
Philadelphia, 13 5 362

China Clay—
Baltimore, 238 t.
Bombay, 770 cks.
Boston, 260
Calcutta. 140
Montreal, 215

Citric Acid—
Madeira, 1 c. £8
Vera Cruz, 4 2 q 26

Coal Products—
Aniline
Montreal, 1 ck.
Aniline Oil
Boston, 10 kgs.
Aniline Salts
Barcelona, 4 brls.
Piræus, 20
Naphtha
Sydney, 5 cs.
Pitch
Ferrol, 50 brls.
Tar
Galatz, 25 brls.
Tar Oil
Johannesburg, 30 dms.

Cobalt Oxide—
Gijon, 1 c. 3 q. £62

Copperas –
St. John, N.B., 1 t. 6 c. £3
Tripoli, 2 13 3 q. 4
Beyrout, 1 6 3 2
Trieste, 9 19 3 19

Copper Sulphate—
Genoa, 10 t. 1 c. 1 q. £168
Rouen, 23 2 375
Dunedin, 1 17
Madras, 1 5 21
Smyrna, 4 4
Constantinople, 2 32
Havre, 2 33
Rotterdam. 21 2 329
Catania, 7 110
Marseilles, 7 10 100
Rangoon, 1 5 21
Victoria B.C. 4 66

Dextrine—
Montreal, 11 t. 1 c. £171

Disinfectants—
Sydney 100 kgs. 2 cs. £25
Pt. Natal, 5 t. 2 c. 25

Dyestuffs—
Alizarine
New York, 5 cks.
Aniline Colours
Hespeler. Ont., 5 kgs
Extracts
Boston. 10 cks.
Cornwall, Ont., 100
New York, 20
Logwood
Barcelona, 6 cks.

Dyestuffs (*otherwise undescribed*)
Barcelona, 540 pks.
Rouen, 58
Glycerine—
Pt. Said, 1 t. 2 c. 1 q. £29
Yokohama, 4 200
Hiogo, 14 240
Guano—
Malaga, 40 t. £300
Seville, 12 5 c. 95
Lead Acetate—
Santos, 6 c. £11
Magnesia—
Melbourne Wf., 13 cs.
Rouen, 30
Valencia, 1
Magnesium Sulphate—
La Guayra, 8 cs.
Lisbon, 43 bgs.
Portland, Or., 75 brls.
Manure—
Barcelona, 5 t. 3 c. 2 q. £54
Oxalic Acid—
Lisbon, 6 c. 2 q. £7
Boston, 10 t. 17 300
Paint—
Antofagasto, 30 cs.
Barbadoes, 13 cks.
Barranquilla, 74 kgs.
Belize, 13 pks.
B. Ayres, 140 brls.
Calcutta, { 2 / 9 cks.
Havana, 13
Hong Kong, 175
Malta, 10 kgs.
Manaos, 595
Para, 10 cks.
Philadelphia, 1
Piræus, { 1 / 41 cs.
Pt. Said, 12 tcs.
Trieste, 12
Tumaco, 43
Yokohama, 1,000 kgs.
Painters' Colours—
Bahia, 2 cks. 2 cs.
Callao, 15
Ferrol, 2 brls.
Hong Kong, 50
Johannesburg, 11 49 pks.
Madras, 27 cs
Maranham, 1 kg. 5 brls.
Messina, 13 cks.
New York, 1
Philadelphia, 2 kgs. 200
Piræus, 1 ck.
Rotterdam, 2 cs.
Paraffin Wax—
Bari, 20 bgs.
Constantinople, 60
Genoa 225
Leghorn, 100
Lisbon, 110
Paris, 10 cs
Salonica, 1 ck.
Trieste, 10 bgs.
Phosphates—
Hamburg, 50 t. £190
Phosphorus—
Hiogo, 5 t. £1,008
Shanghai 1 8 c. 214
Yokohama, 2 10 504
Potassium Bichromate—
Rouen, 5 t. 5 c. 3 q. £176
Barcelona, 1 15 55
Smyrna, 5 1 2 170
Piræus, 6 2 130
Oporto, 15 1 25
Vera Cruz, 5 brls. 42
Lisbon, 1 ck. 8
Potassium Chlorate—
Ceara, 1 c. £5
Hiogo, 25 t. 730
Hamburg, 1 10 45
New York, 15 10 441
Gutujewski 15 460
St. Petersburg, 5 150
San Francisco, 2 10 75
Potassium Iodide—
Pt. Said, 4 c. 2 q. £12
Potassium Prussiate—
Vera Cruz, 1 t. £63
Barcelona, 1 64
Montreal, 1 c. 4
Potassium Stannate—
Bombay, 1 t. 1 c. 3 q. £60
Salt—
Astoria, 75 t.
Bahia, 50 cs,
Baltimore, 100
Boston, 230
B. Ayres, 88
Calcutta, 5,184
Cameroons, 50
Conakry, 30
Dunedin Wf., 10
Ewango, 499 bgs.
Galveston, 750 t.
Hamburg, 6
Isles de Los, 50
Kowillow, 9
Lagos, 50
Landana, 25 5 c.
Loango, 5 pks.
Matadi, 44 12
Melbourne, 20
Montreal, 130 17,320 sks.
Newcastle, 54
New York, 10
Penang, 500
Quebec, 50
Rio de Janeiro, 10 100 cs.
Rotterdam, 210
St. John's, 15
Sydney, 1,420 c.
Trinidad, 22
Trangisvaag, 114
Vancouver, B.C., 25
Salt Cake—
Antwerp, 60 t. £63
Baltimore, 25 10 c. 44
Montreal, 1 2
Philadelphia, 51 1 81
Wellington, 5 3 7
Saltpetre—
Bahia, 23 t. 4 c. 3 q. £526
Halifax, 10 11
Maranham, 5 5
Para, 1 20
Pernambuco, 2 13 56
Valparaiso, 13 297
Sheep Dip—
Algoa Bay, 2,000 dms. £250
Bahia Blanca, 11 t. 185
B. Ayres, 60 8 c. 2 q. 1,509
E. London. 1,000 dms. 125
Pt. Elizabeth, 5 2 10
Soap—
Abonnema, 100 bxs.
Akassa, 72 dms.
Alexandria, 11
Algoa Bay, 210 10 cks.
Antwerp 100
Barranquilla. 2 cs.
Bathurst, 16
Belize, 625
Bissao, 10
Bombay, 1,220 40
Calcutta, 25
Callao, 15
Canaria, 704
C. C. Castle, 224
Cape Town, 2,100 20
Chama, 50
Corinto, 100
Curacao, 365
Delagoa Bay, 700 121
E. London, 675
Genoa. 25
Gibraltar, 226
Hamburg, 18
Havana, 200
Karachi, 64
Johannesburg, 70
Kingston, Ja., 1,300
Limassol, 5
Madras, 12
Malta, 1,320
Manaos, 100
Maranham, 1
Mauritius, 2,002
Melilla, 110
Montreal, 4
Newcastle, 9 tanks
New York, 65
Penang, 15
Piræus, 20 pks.
Pt. Elizabeth, 50
Pt. Natal, 150
Pt. Nolloth, 50
Pt. Said, 21
Pretoria, 20
St. John's, 80
San Juan, 100
Sapeli 100
Shanghai, 140
Sierra Leone, 240
Smyrna, 20
Tangiers, 40
Teneriffe, 95
Toronto, 1,000 cs.
Trinidad, 450
Warri, 100
Soda Ash—
Aalborg, 200 bgs.
Acajutla, 30 cks.
Amsterdam, 1,000
Ancona, 4
Auckland, 130
Barcelona, 50
Barranquilla, 20 brls.
Boston, 200 66 tcs.
B. Ayres, 250 brls.
Ceara, 10
Christiania, 23
Dunedin, 54
E. London, 100 cs.
Genoa, 500
Georgetown, 223
Gutujewski, 89
Helsingfors, 20
Hiogo, 339
Hong Kong, 116
Kobe, 193
Lagos, 20 kgs.
Leghorn, 100 bgs.
Melbourne, 143
Madras, 4
Montreal, 100
Naples, 200
Newfairwater, 940
New York, 500 51 cs. 67
Philadelphia, 280 57 tcs.
Pt Calbarne, 600
Puerto Cabello, 25
Salonica, 60 brls.
San Francisco, 220
Skien, 50
Stettin, 350
Sydney, 614
Toronto, 864 1,311 tcs.
Trieste, 100
Venice, 150 110
Vera Cruz, 79
Vancouver, 25
Wellington, 209
Soda Crystals—
Alexandria, 100 brls.
Barbadoes, 14 cks.
Calcutta, 25
Halifax, 25 60 pks.
Johannesburg, 50 kgs.
Kobe, 301
Lisbon, 4 cs.
Malta, 150 brls.
Montreal, 550 bgs.
Newcastle, 149 kgs.
Petrolia, 120 bgs.
Singapore, 55
Sodium Biarseniate—
Santos, 2 cks.
Sodium Bicarbonate—
Alexandria, 50 kgs.
Alicante, 75
Amsterdam, 20
Barcelona, 305
Bombay, 100
B. Ayres, 66 cks.
Cape Town, 8 bgs.
Copenhagen, 6
Dunedin, 290 20
E. London, 20 cs.
Ghent, 12 pks.
Gutujewski, 100
Hamburg, 50
Hiogo, 400
Hong Kong, 60
Johannesburg, 110 bgs.
Karachi, 40 7 cks.
London, 50 25
Lyttelton, 5
Marseilles, 80
Melbourne, 910 18
Mexico, 18
Madras, 100
Mollendo, 10
Montreal, 50 dms.
M. Video, 20
Naples, 60
Newcastle, 50
Odessa, 60
Paris, 58 pks.
Rangoon, 15 8 cks.
St. Petersburg, 100
Seville, 65 9
Singapore, 4
Sydney, 500
Toronto, 70
Victoria, 75 6
Wellington, 265
Vancouver, 6
Venice, 50
Sodium Carbonate—
Baltimore, 12 brls.
Sodium Chlorate—
Boston, 200 kgs.
Hamburg, 5 12 brls. 5 pks.
Gutujewski, 100
Sodium Silicate—
Kingston, Ja., 12 brls.
Sodium Sulphate—
Halifax, 1 ck.
Starch—
Havana, 3 cs.
Maranham, 10 bgs.
Sulphur—
Trinidad, 5 t. 2 c.
Montreal, 26 2
Gothenburg, 50
Halifax, 2
Sulphuric Acid—
Maranham, 1 t. 3 c.
Superphosphates—
Las Palmas, 30 t.
Seville, 73 15 c.
Culiero, 200
Alicante, 50
Nantes, 83 10
Tarragona, 10
Teneriffe, 20
Valencia, 50 2
Venice, 40 5 1 q.
Gandia, 68 1
Barcelona 200
Gd. Canary, 5
Fremantle, 175
Tannin—
Montreal, 2 c. 2 q.
Varnish—
Accra, 10 dms
Antwerp, 9 cks.
Madras, 7 cs.
Piræus, 1
White Lead—
Monterey, 4 cks.
Zinc Chloride—
Maranham, 9 c. 3 q.

MANCHESTER

Week ending October 26th.

Alum—
Beyrout, 1 kg.
Ammonium Carbonate—
Malmo, 3 cks.
Aniline Colours—
Germany, 3 cs.
Caustic Soda—
Alexandretta, 40 dms.
Chemicals (*otherwise undescribed*)
Alexandria, 100 brls.
Antwerp, { 32 kgs. 6 c. / 6 cks.
Hamburg, 10
Rotterdam, { 18 4 / 19 kgs.
Shiray, 1
Coal Products—
Aniline Oil
Germany, 2 brls. 4 dms.
Aniline Salts
Germany. { 3 kgs. / 16 cks
Mersyne, 10 brls
Naphthol
Germany, 4 cks.
Naphthylamine
Germany. 28 cks.
Pitch
Marseilles. 1,686 t.
Toluol
Belgium, 5 dms.
Colours—
Bussorah, 4 kgs. 5 cs.
Glue—
Germany, 12 cks.
Holland, 12
Glycerine—
Germany, 5 cbys 2 cs
Stettin, 10 dms.
Magnesium Sulphate—
Gothenburg, 10 bgs.
Oxalic Acid—
Bushire, 4 cs.
Paint—
Beyrout, 5 kgs. 1 brl.
Jaffa, 2 cks. 1
Malta, 1 cs.
Mersyne, 22 kgs.
Painters' Colours—
Alexandria, 40 brls.
Mersyne, 4 kgs.
Potash—
Beyrout, 3 brls.
Potassium Bichromate—
Bushire, 8 cs.
Salt—
Gothenburg, 200 t.

1 cs.
Bicarbonate—
30 dms.
5 cks.

HULL.

Week ending October 22nd.

25 cks.
Sulphate—
61 brls.
300 bgs.
Acid—
50 btls.
Soda—
20 dms.
35
300
Salts *(otherwise undescribed)*
12 btls.
20 cks.
15 pks.
1,373 brls.
1,679 slbs.
20 pks.
10
2 cs.
1 24
400
372 slbs.
45 144
54 3
10 pks.
64
32 40 6
5 5
12
2
14
17 15
Seed Oil—
100 c.
25
18
270
70
600
101
100
455
812
34
Cake—
55 cks.
Stuffs *(otherwise undescribed)*
1 dm.
4 cks. 4 cs.
1
5 bgs.
Seed Oil—
16 c.
4
585
159
41
82
42
96
17
Cake—
1,528 bgs.
100 t.
Lead White—
50 bgs.
3 cks.
Colours—
32 cks. 30 dms.
63 177 pks.
19 cs. 16 dms.
4
80 71 5
22 24
16
48 pks.
1 4 1
13
35 dms.
8 1 135
3
19 4
1
18
15
1
1
2

Pitch—
Antwerp, 257 t.
Helsingfors, 112 cks.
Soap—
Amsterdam, 40 cs.
Bombay, 10
Christiania, 1
Copenhagen, 1
Gothenburg, 1
Starch—
Antwerp, 3 bgs.
Tallow—
Antwerp, 55 cks.
Danzig, 60
Hamburg, 2
Stockholm, 8
Tar—
Amsterdam, 20 brls.
Antwerp, 4 cks.
Dunkirk, 35
Turpentine—
Antwerp, 150 cks.
Varnish—
Bombay, 75 dms.
Gothenburg, 9 cs.
Norrkoping, 2 cks.
Palermo, 1
Stettin, 5

GLASGOW.

Week ending October 27th.

Acids—
Madras, £21
Albumen—
Paris, £51
Ammonium Carbonate—
Stockholm, £28
Ammonium Chloride—
Stockholm, £16 10s.
Ammonium Sulphate—
Amsterdam, 120 t. 4 c.
Barbadoes, 53
Barcelona, 231 5¾
Berbice, 49 8½
Demerara, 605 16
Hamburg, 50 15
Valencia, 260 7½
Asbestos—
Trinidad £22 18s.
Bleaching Powder—
Calcutta, 64 t. 1 c.
Boracic Acid—
Sydney, £25
Borax—
Antwerp, £48 16s.
Fremantle, £22
Rotterdam, 135
Calcium Carbonate—
Lisbon, £10
Chemicals *(otherwise undescribed)*
Calcutta, £74
Rotterdam, 29
Coal Products—
Alizarine Oil
Lisbon, £40
Anthracene Oil
Gothenburg, £70
Creosote Oil
France, £3,673
Lisbon, 1,274
Pitch
Bombay, £40
Danzig, 155 t. 5 c.
France, 53
Gothenburg, 440
Tar
Bombay, £40
Calcutta, 182
Christiania, 2 t. 8 c. 3
Danzig, 68 10
Stockholm, £1,547 15s.
Tar and Pitch
Canada, £356
Dried Blood—
Paris, 30 t. 5¾ c.
Dyestuffs *(otherwise undes.)—*
Barcelona, £100
Portugal, £21 11s.
Farina—
Philadelphia, £75
Gelatine—
Philadelphia, £262
Iodine—
Rotterdam, £225
Lead Sulphate—
Stockholm, £125

Linseed Oil—
Antwerp, 1 t. 13¾ c.
Cape Town, 14
Christiania, ¾
Demerara, 2 1½
Fredrikstad, 10
Montreal, 12 8
Litharge—
Antwerp, £20
Halifax, 22
Johannesburg, 23
Magnesium Sulphate—
Paris, £24
Manganese—
Antwerp, £50
Manure—
Demerara, 40 t.
Paint—
Bombay, £881
Calcutta, 474
Canada, 45
Christiania, 6
Fredrikstad, 24
Iquique, 32
Perth, 61
Rio de Janeiro, 20
St. John's, N'fld., 24
Painters' Colours—
Bombay, £90
Calcutta, 142
Cape Town, 100
Colombo, £21 10s.
E. London, 26 5
Sydney, £479
Trinidad, 55
Paraffin Wax—
Barcelona, £53
Bilbao, 31
Bombay, £25 10s.
Cape Town, £93
Sicily, 130
Stockholm, 115
Potassium Bichromate—
Amsterdam, £147
Barcelona, 2,213
Bombay, 60
Lisbon, 38
Philadelphia, 390
Rouen, 362
Potassium Chlorate—
Sydney, £40 13s.
Potassium Cyanide—
Madras, £458
Potassium Prussiate—
Barcelona, £62
Halifax, 20
Soap—
Calcutta, 3 t. 18 c.
Trinidad, 2 10
Sodium Bichromate—
Barcelona, 18 t. 14½ c.
Rouen, 7 5½
Stannous Chloride—
Demerara, £32
Sulphuric Acid—
Calcutta, £40
Colombo, 35
Madras, 25
Tallow—
Bilbao, 16 t. 19 c.
Fredrikstad, 1½
Rotterdam, 4 16
Turpentine—
Stockholm, £185

TYNE.

Week ending October 22nd.

Alkali—
Antwerp, 10 t. 1 c.
Gothenburg, 25 9
Hamburg, 5 11
Ammonium Carbonate—
Hamburg, 1 t. 10 c.
Ammonium Chloride—
Gothenburg, 2 t. 15 c.
Antimony—
Ergasteria, 2 c.
Rotterdam, 5 t.
Arsenic—
Christiania, 11 c.
Barium Binoxide—
Antwerp, 10 t. 15 c.
Hamburg, 2 5
Rouen, 17 4
Barium Carbonate—
Hamburg, 127 t.
Rouen, 37 10 c.

Bleaching Powder—
Antwerp, 82 t. 19 c.
Christiania, 10 3
Copenhagen, 7 17
Drontheim, 10 2
Gothenburg, 35 3
Hamburg, 5 13
Rotterdam, 10 3
Valparaiso, 4 9
Caustic Soda—
Gothenburg, 68 t. 3 c.
Odense, 1 3
Rotterdam, 16
Fluor Spar—
Gothenburg, 130 t.
Litharge—
Gothenburg, 2 t. 15 c.
Hamburg, 3 16
Oporto, 1 3
Magnesia—
Antwerp, 16 c.
Hamburg, 1 4
Rotterdam, 19
Manganese—
Antwerp, 2 cks.
Paint—
Antwerp, 1 t. 6 c.
Pitch—
Rouen, 20 t.
Saltpetre—
Aarhuus, 5 t.
Soda—
Antwerp, 9 t. 18 c.
Christiania, 17 13
Gothenburg, 2 7
Harlingen, 9 19
Rotterdam, 43 11
Soda Ash—
Bergen, 10 t.
Gothenburg, 158
Sodium Hyposulphite—
Hamburg, 27 t.
Sodium Sulphate—
Antwerp, 200 t.
Gothenburg, 13 3 c.
Sulphur—
Christiania, 225 t.
Gothenburg, 332 10 c.
Superphosphates—
Aalborg, 100 t. 1 c.
White Lead—
Copenhagen, 2 t.

GOOLE.

Week ending October 19th.

Alkali—
Antwerp, 2 pks.
Rotterdam, 2 cks.
Chemicals *(otherwise undescribed)*
Amsterdam, 16 cks.
Coal Products *(otherwise undes.)—*
Amsterdam, 84 cks.
Boulogne, 28 3 cs. 7 pks.
Ghent, 1
Rotterdam, 2
Dyestuffs *(otherwise undescribed)*
Antwerp, 1 ck.
Hamburg, 1
Manure—
Dunkirk, 208 bgs.
Ghent, 123
Painters' Colours—
Boulogne, 3 cks. 3 cs.
Pitch—
Antwerp, 210 t.

GRIMSBY.

Week ending October 22nd.

Alkali—
Hamburg, 15 cs.
Caoutchouc—
Esbjerg, 1 ck.
Gothenburg, 1 cs.
Helsingborg, 1 pk.
Malmo, 1
Chemicals *(otherwise undescribed)*
Dieppe, 3 cs.
Malmo, 6 cks.
Coal Products *(otherwise undes.)—*
Dieppe, 27 cks. 10 pks.
1 kg. 6 brls.
Painters' Colours—
Antwerp, 5 cks.
Hamburg, 14
Rotterdam, 3 1 cs.

PRICES CURRENT.

WEDNESDAY, NOV. 2, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may va*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	32	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	9	15	0
,, ,, (grey) Hull .. .. ,,	9	15	0
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	17	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8¾
,, 50/90 ,, ... ,,	0	0	9
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	7
,, (liquid 95/97%) .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1½
Copper .. .. per ton	54	6	3
,, Sulphate .. .. ,,	18	0	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	15	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	17	0	0
,, *Carbonate (white* lead) pure .. .. .. ,,	17	10	0
,, *Nitrate* .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	
,, ,, (grey) (ex ship) .. .. ,,	7	17	
Magnesium (ribbon and wire) .. .. per oz.	0	2	
,, Chloride (ex ship) .. .. per ton	2	10	
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton	9	10	
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	
Manganese, Sulphate .. .. ,,	17	0	
,, Borate .. .. per cwt.	2	2	
,, Ore, 70% .. .. per ton	3	10	
Methylated Spirit, 61° O.P .. .. per gallon	0	2	
Naphtha (Wood), Solvent .. .. ,,	0	2	
,, ,, Miscible, 60° O.P. .. .. ,,	0	3	
Oils:—			
Cotton-seed .. .. per ton	15	15	
Linseed .. .. ,,	18	10	
Stearine .. .. ,,	25	0	
Phosphorus (Yellow) .. .. per lb	0	1	
,, (red) .. .. ,,	0	2	
Potassium Bichromate .. .. nett ,,	0	0	
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	
,, Chlorate .. .. per lb.	0	0	
,, Cyanide, 98 % .. .. ,,	0	1	
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	5	
,, ,, ,, 75/80 % .. ,,	17	15	
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	
,, Nitrate (refined) .. .. ,,	19	15	
,, Permanganate .. .. per cwt.	2	15	
,, Prussiate Yellow .. .. per lb.	0	0	
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	
,, Muriate, 80 % ,, ... ,,	8	15	
Silver (metal) .. .. per oz	0	2	
Sodium (metal) .. .. per lb.	0	2	
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	f.o.r. wks.
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	
,, ,, (Carb. Soda-ash) 48 % .. ,, ,,	4	0	
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,,	4	0	
,, ,, (Soda Crystals) .. .. ,, ,,	2	7	
,, Acetate (ex-ship) .. .. ,,	12	5	
,, Arseniate, 45 % .. .. ,,	13	0	
,, Chlorate .. .. per lb.	0	0	
,, Borate (Borax) .. .. nett per ton	13	15	
,, Bichromate .. .. per lb.	0	0	
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton	7	15	10 ton lots
,, ,, (74 % Caustic Soda) ,, ,, ,,	7	10	
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	0	
,, ,, (60 % Caustic Soda) .. ,, ,,	6	0	
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	15	
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	
,, Bicarbonate .. .. ,,	6	10	
,, Hyposulphite .. .. ,,	5	5	
,, Manganate, 25 % .. .. ,,	15	0	
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	
,, Nitrite, 98 % .. .. per ton	25	0	
,, Phosphate .. .. ,,	10	0	
,, Prussiate .. .. per lb.	0	0	
,, Silicate (glass) .. .. per ton	4	10	
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	
,, Stannate, 40 % .. .. per cwt.	2	15	
,, Sulphate (Salt-cake) .. .. per ton	1	6	
,, ,, (Glauber's Salts .. .. .. ,,	1	7	
,, Sulphide .. .. ,,	7	5	
,, Sulphite .. .. ,,	4	15	
Strontium Hydrate, 100 % .. .. ,,	10	15	
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	
,, Barium, 95 % .. .. ,,	0	0	
,, Potassium .. .. ,,	0	0	
Sulphur (Flowers) .. .. per ton	7	7	
,, (Roll Brimstone) .. .. ,,	6	3	
,, Brimstone: Best quality .. .. ,,	4	12	
Superphosphate of Lime (26 %) .. .. ,,	2	10	
Tallow .. .. ,,	23	5	
Tin Crystals .. .. per lb.	0	0	
,, English Ingots .. .. per ton	86	0	
Zinc (Spelter) .. .. ,,	24	10	
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	
,, Sulphate, Crystal .. .. ,,	6	7	

THE

HEMICAL TRADE JOURNAL

AND

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DVERTISEMENTS.

E OF CHEMISTRY OF GREAT BRITAIN AND IRELAND.

CE is hereby given that Examinations for the iateship (A.I.C.) and Fellowship (F.I.C.) of the Institute of Chemistry at the Laboratories of the Institute, 30, Bloomsbury-square, London, esday, the 10th day of January, 1899, and three following days.

angements for the various Examinations depend upon the number of presenting themselves Candidates for the Intermediate Examination, Examination under regulations in force prior to October 1st, 1893, may, required to present themselves from Tuesday, January 3rd, to Friday, . Notice will be given to all Candidates whose applications for are accepted.

ions should be forwarded to the Secretary not later than December 9th, ich day the Examination List will be closed.

By Order of the Council,

J. MILLAR THOMSON, Hon. Registrar.

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CURRENT TOPICS.

THE DANGERS OF "SAFETY" MATCHES.

A MONTH or two back, when the question of phosphorus poisoning among match-makers was being heatedly discussed in Parliament and the daily news-sheets, the great and manifold advantages of so-called "safety" matches were extolled in terms of unstinted rhetoric.

It transpired, however, that the exacting British Public did not favour "safety" matches, and refused them unless strike-anywhere matches were absolutely unobtainable.

It was urged, on the strength of this fact, that it was a simple thing to stamp out the dangerous strike-anywhere matches and banish for ever the horrors of the manufacturing process, for it was only necessary to make the dangers of the workers and this simple remedy more widely known, and the public would, in a very short time, adopt the use of safety matches generally and exclusively.

May be—may be not. The principle was good, the reasoning sound; but the task was gigantic. There was no doubt, however, that this change would in no way lessen trade competition and the cutting of prices. The public having experienced matches at 12 boxes a penny—and good matches at that—would have wanted cheap matches, be they "safeties" or not, and it is a certainty they would have been forthcoming.

In the light of an action for damages which has been concluded this week, it seems that there would have been serious disadvantages attached to even safety matches. A box of safety matches—labelled "Made in Sweden"—were fired in a woman's hand by the act of opening the box, and her husband was awarded £75. damages in consideration of the injuries which she suffered. Possibly the behaviour of these "safeties" has something to do with their unpopularity among the British public?

At any rate, the prospect of this country being flooded with cheap safety matches is not enhanced by the incident we recite. Yet they would have come as thick as locusts, if our anti-necrosis zealots had had their way; while the public would be even more careless—if possible—with them because of their reputation as "safeties."

In advocating wholesale changes it is necessary to look calmly at the fire as well as the frying-pan before jumping out of the latter, and the case in point is an instance of this.

In order to eliminate risks of a limited, and practically avoidable, nature, the would-be reformers would probably have exposed the general public to a far-reaching danger, the ravages of which would not have been so apparent as those of phosphorus poisoning, but in reality far more detrimental to the welfare and safety of the public and their property.

THE FOOD AND DRUGS ACT AT FAULT AGAIN.

The mysteries of the Food and Drugs Act are interminable, and the legal definitions of what are food stuffs and what are

not, have often smacked more of Gilbertian paradoxy than common sense.

Thanks to the progress of bacteriology this comparatively new agency has proved of signal service in the investigation of doubtful food-stuffs, whatever its future in the field of sewage treatment may be; and by its aid several serious outbreaks of zymotic diseases have unquestionably been traced to that mysterious compound popularly known by the colloquial title of "hokey-pokey," though the vendors of the article are generally honoured by the more euphemistic designation of "ice-cream men."

When science has detected the source of danger, and practical people seek to lay it at once, they are sharply brought to the halt by the vagaries of the law. Ice cream is not a drug. Who would suppose it was? But what is more it is not a food! Though made absolutely for no other purpose than to be eaten, still it is not a food. We suppose the legal explanation of this anomaly may be expressed by analogy. If people liked to chew the leaves of a yew tree they would probably die, but the fact would not make yew leaves a food-stuff; and if they are foolish enough to eat ice cream of unknown origin and purity, the yew tree principle still holds good.

Judging by recent revelations, however, we should think it was a simple thing for the legal mind to conceive how to prove that ice cream of the "hokey-pokey" order is a drug. It is closely allied in its poisonous properties. All the same, personally, we cannot get over the fact that this commodity is never made at all except for dietetic purposes, even though they be of the epicurean order.

Suffocated by Water-gas.—On Tuesday an inquest was held at Manchester on the body of John Clelland (21), who was employed as foreman of the water-gas plant at the Bradford-road works of the Manchester Corporation. It was part of the deceased's duty to attend to the proper working of a gas-cooling chamber, and in spite of a warning by the manager never to go down the man-hole, Clelland descended on Friday and again on Sunday. His last venture was fatal. He was overpowered, and on an alarm being raised, John Mason, the yard foreman, bravely attempted to rescue him. Feeling that the fumes were also overcoming him, Mason was obliged to ascend and get assistance. Eventually the unconscious man was got out by means of a rope. Oxygen was administered to him, but he never recovered consciousness, and died at the Ancoats Hospital the same day. In recording the jury's verdict of "Accidental poisoning by water-gas," the Coroner described Mason's attempted rescue as a noble act, and said that the Gas Committee should be proud of such a workman.

Galvanising Trade in the Midlands.—At the last meeting of the Walsall Chamber of Commerce a letter was read from Messrs. Walker Brothers, of the Staffordshire Galvanising Works, Walsall, calling attention to the fact that an endeavour was being made to establish a steamship service from Newport (Wales) to the Cape. Should this be done, it would mean the ruining of some of the trades in the Midland district, and it was suggested that the Chamber should, as far as possible, discourage the proposal. Mr. Williams, secretary for Messrs. Walker, explained that the trades of the district were already greatly hampered by what they considered the excessive railway rates to the seaports. His company had been told several times by intending purchasers that it was useless asking their firm for quotations, as, owing to the geographical position of their works, they could not compete with manufacturers nearer the coast. It was stated in the course of the discussion that none of the steamship companies were likely to accede to the proposal, at present at any rate; but Mr. Scott urged that in any case the Chamber would be very unwise to attempt to stand in the way of trade development in South Wales. Personally he was inclined to think that making Newport an additional port of departure would be rather an advantage than otherwise to the multifarious trades of the district. He agreed that the railway-rate difficulty with regard to the heavy trades was not easily to be overcome, and it seemed probable that in course of time a number of industries would have to disappear from the Midlands, unless there could be a development of waterways, which he was afraid could not be expected. The chairman agreed that, while a threatened displacement of labour was always a serious matter, the Chamber could not hold out any hope that they could take action in the way which was suggested.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

"THE ELECTRO-CHEMICAL COMPANY, LTD."

(To the Editor of the Chemical Trade Journal.)

Sir,—In your issue of the 5th inst., under the head of New Companies, there appeared a paragraph to the effect that a new company was formed, styled the "Electro-Chemical Company," with a registered office at Bradford. As this title is precisely similar to the name of our Company, and would be likely to cause some confusion, I at once communicated with the Registrar of Joint Stock Companies, calling his attention to the paragraph, and he writes in reply, under date of the 8th inst., stating that the "registration referred to in the paragraph has not taken place as the name would not be considered available." I shall be glad, therefore, if you will kindly insert this letter in the next issue of your journal, or correct the paragraph in your own way, giving to the correction the same publicity as the original announcement.

I am, yours &c.,

St. Helens, Lancashire, Nov. 9, 1898. Robert Shaw, Secretary, Electro-Chemical Co., Ltd.

[The company was certainly notified from trustworthy sources as having been registered on October 22nd., and we recorded the fact accordingly. Our responsibility ends there.—Ed., *C.T.J.*]

ANSWERS TO CORRESPONDENTS.

Borax.—We are obliged for your interesting postcard. As you reverse the order of things and give us "the lie direct" to start with, we will follow your lead and content ourselves with the "retort courteous." Possibly you may revert to the "quip modest" next time. We happen to know that it was possible to do last week all that you style impossible. To-day the position is very different. We do not prophesy, we chronicle. We leave the exercise of the former art to the "Light that Failed."

M.N.—We are obliged, and shall be glad to do the same again at any time.

G.P.C.—Why not subscribe for a quarter? It will save you time, trouble, and very often disappointment.

P. (Galicia).—1. We sent the one you wanted, and also an extra copy of the latest index issued. You seem to have received the latter and not the former. We trust the duplicate we have despatched will arrive safely this time. 2. We have not forgotten your request about the salt figures, but we cannot give them before the Government graciously condescends to publish them. They are not out yet. If you refer back you will find it was as late as December, in 1896. N.B.—Since writing we learn that the returns will be issued next week.

Danger of Steam-Jets as Fire Extinguishers.—The current number of *Cassier's Magazine* contains the following instance of the danger of using steam-jets for extinguishing fire:—On a cargo steamer carrying several hundred tons of coal, &c., fire broke out in one of the holds, which were furnished with steam-jet fittings; and the jets were at once turned on. On the day following it was proposed to try a hose, in addition to the jets; and one of the upper deck hatches was taken off. The almost immediate result was a violent explosion, killing one of the officers and seriously injuring another. The ship began to leak and had to be abandoned. One explanation is that the steam from the jets, passing over the incandescent cargo, formed water gas, which, with a suitable admixture of air, became explosive.

Manchester Cleansing Department.—The accounts of the Cleansing Department for the year ending March last have been issued. In the scavenging section the net expenditure was £41,496, involving a rate of 3¼d. in the pound. This cost is slightly lower than in any of the five preceding years. The nightsoil section has been a net charge of £80,570., which entails a rate of 6 1-3d. in the pound. The rate is higher by the ninth of a penny than last year, but lower than in any of the five preceding years. It is noteworthy that in the scavenging department labourers' wages, which were 12s. 6d. a week fifty years ago, have steadily risen every decade, and now stand at 20s. a week, the amount having been stationary since 1890. Carters' wages in the nightsoil section, 16s. 6d. a week fifty years ago, have also steadily risen, and are now fixed at 26s. a week. The quantity of nightsoil collected annually approaches nearly a quarter of a million loads.

Personal.—*The Chemical Engineering Company*, 61 and 62, Gracechurch Street, E.C., and Stratford, E., has acquired the sulphate of ammonia and tar distillation plant business carried on by Mr. Maurice Schwabe at Manchester for the last fifteen years. Mr. Schwabe has been appointed general manager of the Company as well as of Wilton's Patent Furnace Company, whose offices are at the same address. Mr. Schwabe removed to London last week, and his office in Manchester has been closed. *Mr. Henry G. Eckstein*, one of the foremost experts in the cottonseed oil and soap industry, has resigned his position as general superintendent of manufacture of the N. K. Fairbank Company. Owing to the ill-health, he retires to secure much-needed rest. Mr. Eckstein is the inventor of processes which have largely revolutionised these industries. His discoveries, of which the process for deodorising cottonseed oil is the most important, have been adopted by the leading manufacturers.

The Patent List.

list is compiled from Official sources in the Manchester l Laboratory, under the immediate supervision of E. Davis and Alfred R. Davis, who report professionally value of Chemical Patents.

LICATIONS FOR ENGLISH LETTERS PATENT.

Apparatus. J. F. Jones and E. S. Clegg. 22,318. October 24.
id Carbonate of Zinc from Zinc Ores. G. Rigg. 22,366.
er 25.
g Metals. E D. Hopcroft. 27,421. October 25.
ture of Hard Soap. B. T. Saunders (of the firm of B. C. Taylor). October 25.
is for Purifying Water, etc. H. Desrumaux. 22,520. October 26.
es. A. Luck. 22,525. October 26.
ture of Sulphuric Acid and Apparatus therefor. W. P. Thompson October 26.
ting Machines. E. H. and A. Marcet. 22,633. October 27.
Refractory Ores. R. W. Western. 22,731. October 29.
g Animal and Vegetable Fats, Oils, Waxes, etc. W. J. Engledue J. Yarnold. 22,778. October 29.
ture of Water Gas. J. B. Lafond. 22,784 October 29.

TRACTS OF LATEST COMPLETE SPECIFICATIONS.

abstracts are specially prepared for the Chemical Trade Journal, RIGHTS *of publication are* RESERVED. *This is the earliest abstracts of Chemical and allied patents accessible to the public.*

ments in the Electrolysis of Solutions of Alkali Salts, cially Alkali Chlorides. O. Imray, Birkbeck Bank Chambers, hampton Buildings, London (communicated by Oestr'cher Verein für nische und Metallurgische Production, Aussig, Bohemia). Eng. Pat. 9. July 23, 1898.

lectrodes are submerged in a cell, with the anode in the centre. ide, however, is covered by a bell, which dips considerably e level of the anode. This bell is provided with an inlet pipe electrolyte and an exit pipe for the gas generated by the sition. The liquid in the cathode portion of the cell is kept at nt level by an overflow pipe. The electrolyte is so fed into the a layer of neutral liquid is kept between the cathode and quids. This system (which is illustrated with one figure) is d with six somewhat similar patents in order to emphasise the divergence.

or Improved System of Purifying Sewage or other Liquids by ted Filtration, and Apparatus therefor. R. B. Duncan, of Neville-, Newcastle-on-Tyne. Eng. Pat. 24,180. October 19, 1897.

ies of perforated plates, covered with a layer of gravel or other medium, is fixed in a suitable framework, so as to leave open etween each layer, and the whole is surmounted with a receiv- distributing tank. The liquid thus alternately percolates the filtering layers and falls through the air spaces on to the xt below. Æration is thus effected, while the filter is used usly. The necessary air is supplied to the layers of filtering by louvre boards on the sides of the framework or trays. re three figures. In severe weather the filters can be kept ezing up by steam pipes laid in the filtering trays if necessary.

ments in the Manufacture of Caustic Alkalies from Alloys of with the Alkaline Metals. E. E. Acker, East Orange, New Jersey, A. Eng. Pat. 14,269. June 28, 1898.

loy of lead and an alkali metal is decomposed by the direct f steam, acting on the alloy in a molten state. Hydrogen is and a hydrate of the alkali formed. An ingenious and com- ly simple form of apparatus is used, for particulars of which the tion should be consulted. The lead is recovered in a molten ady to be re-formed into an alloy.

ments in Obtaining Chlorine. A. R. Scott, of the Scott-Vogt ical Works, Kirkintilloch, N.B. Eng. Pat. 27,221. November 20, 1897.

s a modification of Patent 12,074/93, and has reference to the by which the nitrogen compounds are re-converted into nitric conversion now being stopped at the formation of nitric oxide. paratus employed is substantially the same as that described in nt named above. The gaseous chlorine and nitrogen compounds in the earlier stages of the process are passed up a tower down itriol flows. The nitrogen compounds are retained as nitrosyl , which is decomposed in the ordinary way with steam, nitrous de being given off. This is mixed with air to form nitric oxide, used instead of nitric acid in the subsequent operations.

Improvements in the Preservation of Calcium Carbide, and its subsequent Treatment for Use in the Production of Gas. C. J. Lundstrom, 18, Scheelegatan, Stockholm, Sweden. Eng. Pat. 23,793. October 15, 1897.

The carbide is impregnated with oil or turpentine and rendered waterproof. It can readily be decomposed so as to liberate acetylene gas when required, by adding soda or boric acid, etc., to the water used in the generator. As an alternative, the carbide may be impregnated with a solution of these bodies prior to use.

PROFESSOR RAMSAY ON THE NEW GASES.

AT a meeting of the Pharmaceutical Society, held on Tuesday, at 17, Bloomsbury-square, W.C, Professor William Ramsay, F.R.S, gave a lecture on "The New Gases of the Atmosphere." After a brief sketch of the work done by early investigators of the atmosphere, he described the discovery of argon, and narrated how, on Lord Rayleigh's mentioning the difference he had noticed between the density of nitrogen obtained from the atmosphere and that obtained from chemical sources, he had suggested that the former sort of nitrogen was not what it was thought to be, at the same time calling Lord Rayleigh's attention to Cavendish's famous experiment and the residue it left. The result was further inquiry into the matter both by Lord Rayleigh and himself, and finally the joint announcement of argon at Oxford in 1894. The atomic weight of that gas was about 40, while that of helium, which was discovered later in the gas given off by cléveite, was about 4, and between these two there was a vacant place in the periodic scheme of the element. Professor Ramsay told how this missing element was searched for in all sorts of sources in vain until the use of liquid air enabled argon to be liquefied. It was, he mentioned, the residue of boiling liquid air that first showed the spectrum of crypton. When liquid argon was allowed to evaporate the portion that boiled off first was found to have a new spectrum. On this lighter portion being collected and cooled, some refused to liquefy, and this portion, which had a density of about 10, was the missing element. As the gas, which was christened neon, contained some argon and helium the problem arose how to separate it from these substances, and ultimately a process of fractionation was applied. The density varied after each operation, being now a little above 10 and now a little below; but Professor Ramsay had no doubt but that after complete elimination of the impurities it would finally turn out to be near 10. The portion which boiled off last from the liquefied argon was also examined and discovered to be heavier hence the substance originally termed argon was a mixture, though i contained a very large proportion of true argon. This heavy portion had also a distinctive spectrum and a density of 32·5. Now there was room in the periodic table for an element between bromine and rubidium, and he believed that xenon, as this new substance was named, would after purification fill the vacant place satisfactorily. Between iodine and cæsium there was still one gap not as yet filled up, and the missing element should be a liquid. In conclusion, the lecturer said the history of the discovery of these new gases was of no importance commercially or pharmaceutically, but it had a scientific importance as completing the tale of the elements. During the lecture some argon was made, a mixture of lime and magnesium being used to absorb the nitrogen, and the spectra of it and the other new gases exhibited to the audience.

OBSOLETE STOCK EXCHANGE QUOTATIONS:—The ever-growing number of new companies that obtain an official quotation on the Stock Exchange renders it necessary to subject the Official List to revision. This process was recently performed, with the result that the following companies no longer figure on the list:—African Gold Recovery, Limited; New Julia Nitrate, Limited; New Tamarugal Nitrate, Limited, Ordinary; Nitrates Provision Supply Company, Limited; Rosario Nitrate, Limited, five per cent. debentures; San Donato Nitrate Company, Limited; Santa Elena Nitrate, Limited; Smokeless Powder Company Limited; Walkers, Parker and Co., Limited, six per cent. cumulative preference.

THE NOXIOUS "FILLING" OF TEXTILE FABRICS.—At the last meeting of the Manchester Chamber of Commerce, the minutes of the Home Trade Sectional Committee contained a lengthy report of its inquiry into a practice which has become prevalent of "filling" certain classes of textile fabrics with zinc and other moist-attracting materials. Fabrics so treated when worn next to the skin or used as bed clothing become seriously dangerous to health. Abundant evidence of the practice was presented to the Committee, and a resolution condemnatory of it was adopted, with a request that the Board would take steps with a view to its suppression. The Board resolved to publish a summary of the Committee's proceedings in the matter in the newspapers and the textile journals, and requested the Committee to consider, if the evil should not disappear, as a consequence of publicity, what more effectual means can be adopted to put an end to it.

Reports of Companies.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.

The directors of this Company, in their first annual report to September 12th last, state that the properties referred to in the prospectus were, in the first instance, transferred into the name of Mr. James Whishaw, the British Vice-Consul at St. Petersburg, and the business was taken over as from November 13, 1897, subject to all the existing contracts entered into in the ordinary course of business. Steps were meanwhile taken by the directors to obtain the direct recognition of the company by the Russian Government, with liberty to trade and hold petroleum lands in Russia. Shareholders are already aware that the company's petition was duly approved by His Imperial Majesty the Czar, and legal recognition granted to the company. The recognition has been announced in the Official Gazette, and Mr. Whishaw has executed (under authority of the Ministry of Finance) the necessary legal documents, transferring the properties into the name of the company. The steamships *Bibi-Eibat* and *Lindberg*, however, will remain in the name of Mr. Whishaw, as only Russian subjects are allowed to own ships trading in the Caspian Sea. The results of the ten months working have far surpassed the estimates put forward in the prospectus. Aided by

TWO PROLIFIC FOUNTAINS,

the total production somewhat exceeded 63,000,000 poods, or 1,000,000 tons of oil. A recurrence of such results cannot be guaranteed, and the directors trust that the policy which they have adopted of carrying forward a substantial share of the profits realised will meet with the full concurrence of the shareholders. The production of the wells, after deducting 5,000,000 poods estimated to have been burnt, was 58,480,485 poods, viz.: Sold and delivered, 59,260,129 poods; less stock taken over from vendors, 877,349 poods; add stock in hand September 12, 1898, 97,705 poods; total, 58,480,485 poods. This production was disposed of as follows:—Crude naphtha sold, 52,211,876 poods, realising Rs.4,001,823; naphtha astatki sold, 7,048,253 poods, realising Rs.676,995—together 59,260,129 poods, realising Rs.4,678,818. The average price obtained for crude naphtha was therefore 7·67 copecks per pood, and for naphtha astatki 9·60 copecks per pood. The average for crude was somewhat depressed by the large proportion of "fountain crude" necessarily sold for immediate delivery. The refinery having been dismantled during the period under review, operations in benzine, kerosene, etc, have been confined to the realisation of the stocks at the three branches taken over from Mr. Tagieff. Prices for refined oils were depressed during the spring and summer months; but there has been a strong recovery since September.

THE NET PROFITS

available for distribution for the ten months amount to £313,865. From this sum must be deducted the dividend on the ordinary shares of £1. per share on the original £10. shares and the dividend on the preference shares paid April 30 last, leaving a balance on profit and loss account of £254,763. After paying balance of dividend due on the preference shares for the period to September 12, the directors recommend that a further dividend on the ordinary shares of 5s. per share should be distributed to the ordinary shareholders, which will absorb £125,000., leaving a balance to be carried forward to next year of £113,513. The above distributions on the ordinary shares of £1. per share on the original £10 ordinary shares (equal to 2s. per share on the present £1. shares), paid on April 30, and 5s. per £1. share now to be paid, represent a dividend of 35 per cent. for the ten months, or at the rate of 42 per cent. per annum; but, calculating from the due dates of the instalments on the shares, the percentage is 45 per cent. per annum. The board has to report that in July last two fires occurred on the company's property at Bibi-Eibat, for particulars of which the shareholders are referred to the general manager's report. Every precaution has been taken to avoid a recurrence of fires in the future, and particulars of the measures adopted are also set out in the general manager's report. The estimated loss occasioned by the two fires above referred to was 5,000,000 poods of crude oil, together with machinery and derricks approximating to a value of about £15,000. It will be noticed in the accounts, however, that the board has charged profit and loss account with £16,000. to provide for the damage; so that the expense of restoration is well covered. Since the properties were taken over prices of crude oil and astatki have been well maintained, and during the last few months they have advanced steadily. The principal rise, however, took place towards the end of July and during August; but, on account of the stocks having been burnt, the company was not able to reap the full benefit of the advanced prices. The present prices ruling are 11 copecks per pood for crude and 12 copecks per pood for naphtha astatki at Baku. The official returns of production for the Baku district issued up to date show an increase for 1898 of about 25 per cent. over those for last year, and the prices have hardened notwithstanding this increase. This is attributable to the steadily increasing demand from all Southern Russia, especially from the Volga and the Caspian, where liquid fuel is almost exclusively used for steam power. Liquid fuel is also used for brick and lime burning, foundry and smithy work, and in and around Baku it has entirely superseded coal for all kinds of manufactures. The directors desire to record their appreciation of the services of Mr. George Tweedy (the board's representative in Russia), and also of the general manager (Mr. Schumacher). The company has been fortunate in recently securing the services, as manager of the oil wells, of Mr. Emil Otto, who occupied a similar position with Mr. Tagieff for seventeen years.

ACADIA SUGAR REFINING CO., LTD.

The annual meeting of the shareholders of this company was held in the Religious Institution Rooms, Glasgow, on Monday—Mr. W. D. Gilles presiding. In moving the adoption of the report and balance-sheet, the Chairman said:—Before formally moving the adoption of the report and balance sheet it is usual for the chairman at our annual meeting to make a few remarks on the business of the company for the preceding financial year, and I intend to follow the usual course in the present instance, at the same time warning you that my remarks will only be general, and will not take up much of your time. Our competitors in Canada, being private companies, issue no statements, and their chairmen make no speeches. We, as a public company, must issue an annual balance sheet and report to our shareholders, but we need not make long speeches. It must be gratifying to you that the affairs of the company have been brought into a much

MORE FAVOURABLE POSITION

during the past financial year, more especially that we had had to contend with some rather serious difficulties in this period. Among others there was the disturbance to regular steady business in refined sugars owing to the anticipated tariff alterations in the early part of the year. A large quantity of Continental refined sugar was imported into the country, mostly by speculators in order to get the benefit which might accrue from the anticipated increase in the tariff. Dealers besides carried all along an extra stock for the same reason, so that when the time came that the Government did decide this question and did not increase the duty their stocks were pressed for realisation, and in consequence the demand on the refiners fell off, and it was thought prudent, and indeed necessary, by the refiners in their own interests that they should reduce their output, and consequently our refineries were closed down in February and March for seven weeks. In addition to the Continental refined sugar imported to get the benefit of any increased duty there was a considerable quantity throughout last winter which found its way into our dealers' hands, and which competed to a certain extent with us. This, of course, is a direct result of the pernicious Continental

BOUNTY SYSTEM,

without which such imports would have been absolutely impossible. You are aware that the American Government at once put on countervailing duties protecting their own industries as far as they can, and no doubt Canada would follow in the same direction if Great Britain would feel it to be her duty to protect the interests of her own trade and commerce, and adopt what is considered even amongst some of her foremost statesmen the only remedy to meet such unfair competition. England, trained in the principles of Free Trade and believing strongly in free competition, opens her ports to the flags of all nations, and holds her products at the disposal of all the world. But what has this pernicious bounty system to do with free competition, or even with Free Trade? You will observe from the accounts that we have been carrying smaller stocks of sugar during the past year than throughout the previous period, when for what were considered good and sufficient reasons we held a considerable quantity of raw sugar. The amount of loans last year was £41,448., against £3,106. this year, and the interest account had dropped from £9,900. to £3,305. for the year ending September 30, 1898. The directors hope that during the current year the amount charged against interest will be even less. The policy of the directors is to keep a sufficient working stock for the requirements of the business, so that they run no risk at any time of running short of raw sugar. The low level of prices now lessened the risk of holding a full working stock. Looking at the balance sheet you will notice that after paying off the amount at the debit for the last two years—viz., £18,376., and adding £3,082. to the reserve fund—there is a sufficient sum left to pay 3 per cent. on the preference shares and carry forward the sum of £800.

MIGHT HAVE PAID A DIVIDEND.

Had there been no arrears to make up it must be evident to you that we could have paid the full dividend on the Preference shares and also a fair dividend on the Ordinary shares. The buildings and machinery have been kept in perfect condition, and everything is in a position to do a large and increasing business as we may have the opportunity. Let me assure you, gentlemen, that the directors and officials in Canada are devoting great care and attention to the business of the company, in which they have a large interest, and which they

be increasing, and their utmost efforts are being directed to the of how to make the business pay. They have had a good ceptional circumstances to contend against during the past two d I am of opinion they deserve our warmest support and con-

Public and private advices from Canada all agree in stating is moving ahead in a wonderful manner, and indications are ing that she has before her greater commercial prosperity than it been her good fortune to experience in the past. If this be is no reason why the Canadian sugar refiners should not share osperity. As the directors were not disheartened during the s of unprofitable trade which we have passed through, so they nduly elated when the tide now seems to have turned, and t with hope and confidence to the future. I have now said all onsider either necessary or expedient to say, but if any share- n the register is desirous of further information, I am sure the will courteously afford such information as he may desire. remind you that this is a private meeting of the shareholders ompany in Great Britain, and preliminary to the general at Halifax, and if you have any suggestions to make for the meeting, the directors will be only too pleased to convey them airman of that meeting. I now beg to move the adoption of t and balance-sheet. The report was adopted.

LIVERPOOL NITRATE CO., LTD.

rectors' report for the year ended June 30th last, states that the d loss account shows a balance of £1,752, and, adding balance and loss from previous account, £18,746., there is a total of , out of which two dividends have been paid, each of 5 per ving a balance of £9,498. The directors propose a dividend er cent. (being at the rate of 12½ per cent. for the year), forward to next account £1,248. The oficina was worked r months during the year, manufacture being stopped in 1897. The heavy stoppage expenses incurred during nths in keeping the oficina in such condition that work could ed at any time, the cost of important additions to the y, and the depreciation in value of stores, pulperia goods, and have all been charged direct to revenue. On June 16th last on was resumed, since when the nitrate produced shows a ry profit.

COLORADO NITRATE CO., LTD.

rectors' report for the twelve months ended June 30th last states profit and loss account shows a balance of £845., and adding of profit and loss from previous account, £12,249, there is a 13,095., which the directors propose to carry forward to next

The oficina has only worked during four months of the year, s having been closed down in October, 1897, as advised in the t. In consequence of the improvement in the nitrate market tors decided to re-open the works, and commenced making n September 20th. The cost of maintenance of the oficina ppage, and the depreciation written off stores, &c., have been to revenue account. The iodine and unsold portion of the ocks have been valued at cost.

RITISH NON-FLAMMABLE WOOD CO., LTD.

senting the accounts for the fifteen months ended Sept. 30th directors have to report the recent completion of the company's Fulham, which are actively employed in executing orders for esty's Government and other customers. Considerable de- ave already been made of wood treated by the company's which, it is believed, have given entire satisfaction. The are glad to be able to report that they consider the prospects npany are highly satisfactory. The profit and loss account lebit balance on the fifteen months operation of £4,407.

LONDON NITRATE CO., LTD.

port of the directors for the year ended June 30th, states that on trading is £17,059., which is increased to £17,163. by mounts received for interest and transfer fees. Out of this directors have appropriated £5,000. to sinking fund, increasing to £10,000., and, after payment of office expenses in Liverpool come-tax £528., debenture interest £1,500., together with a in exchange of £16., there remains £9,286. to be carried to the heet. Including the net balance of £1,392. brought forward year, there is an amount of £10,679. available for distribution, h sum the directors recommend the payment of 8s. per share, come-tax, on the preference capital (being 4s. balance of arrears account of the year 1897-98, leaving 4s. arrears for 1897-98), ll absorb £8,800., carrying forward the balance of £1,879. to

The assets on the West Coast have been taken at 17d. per Notice has been given to the holders of debenture bonds of the of the directors to pay off £15.000. of these bonds on r 31st next.

Legal Intelligence.

EDINBURGH COURT OF SESSION.

OUTER HOUSE.

Before Lord Low.

M'ARTHUR v. SCOTT.

Judgment was given recently in an action brought by Thomas M'Arthur, dyewood manufacturer and drysalter in Liverpool against William Robert Scott, dyewood manufacturer and drysalter in Glasgow. The parties carried on business together as dyewood manufacturers and drysalters in Glasgow under the firm of M'Arthur, Scott, and Co. from 1882 down to 31st December, 1897, when in consequence of notice of dissolution given by the pursuer to the defender, the partnership was dissolved. The defender became entitled to and obtained possession of the whole assets of the co-partnery, subject to payment to the pursuer of his interest therein. A sum of £18,223. 8s. was found due to the pursuer, payable in three equal instalments at 6, 12, and 18 months. The pursuer claimed payment of interest on the sum at his credit during the non-payment thereof, while the defender held that the pursuer was not entitled to any interest. His Lordship was of opinion that there was no provision in the contract for payment of interest on the sum to which the retiring partner was entitled after the date of the dissolution. He therefore assoilzied the defender.

CHANCERY OF LANCASHIRE.

MANCHESTER SITTINGS.

(Before Vice-Chancellor Hall, Q.C.)

WILLIAMS DEACON AND MANCHESTER AND SALFORD BANK LIMITED *v.* THE POMONA CHEMICAL COMPANY LIMITED.

This case, which was heard on Monday, was a motion for the appointment of a receiver in an action by the plaintiffs, on behalf of themselves and all other debenture holders, for the enforcement of their security against the defendant company, which was incorporated in 1895 with a nominal capital of £12,000, divided into 2,400 shares of £5. each, the total amount paid up being £10,355. It appeared that in July last an order was made for the winding up of the company under the supervision of the Court, but the winding up had not been prosecuted. By consent the motion for a receiver was now turned into a motion for judgment, and the Vice-Chancellor made the ordinary decree in a debenture holders' action, and appointed Mr. R A. Allured receiver and manager. The plaintiffs were represented by Mr. Montgomery, and the defendant company by Mr. Roby.

THE PREPARATION OF RHEA FIBRE.

At a meeting of the Society of Engineers, held at the Royal United Service Institution, Whitehall, on Monday evening, Mr. W. E. Beaumont, president, in the chair, a paper was read by Mr. Perry F. Nursey, past president, on "The Preparation of Rhea Fibre for Textile Purposes."

Mr. Nursey referred to the amount of time, trouble, and money that had been expended in developing the practical application of rhea fibre for textile purposes, which fibre, he said, was the longest and strongest in nature. He had followed the subject for the past sixteen years, during which time he had professionally investigated and reported upon several systems, both mechanical and chemical. The history of the endeavours to utilise the fibre of the rhea plant extended back to the beginning of the present century. It was introduced into Calcutta in 1803, and was brought to England in 1814 by Captain J. Cotton, to whom the Society of Arts awarded a gold medal. In 1840 the Government of India, for a second time, offered a prize for a successful method of preparing the fibre, the prize having been first offered in 1803. No practical result, however, followed upon either occasion. In 1869 the Indian Government offered another prize of £5,000., a portion of which was awarded to a partially successful competitor. The prize was again offered in 1881, but the offer proved barren of practical results. The matter also received the careful attention of the fibre judges at the great Exhibition of 1851, who reported on rhea fibre at some length. The first decorticating process examined by Mr. Nursey was that of M. Favier, in 1882. The rhea stems were steamed, and the bark with the contained fibre stripped off by hand. The author of the paper then described the Frémy-Urbain chemical process, the work of which he had several times investigated in France, the result proving very satisfactory, an excellent *filasse* being produced. He next referred to the opinion of the late Sir Joseph Lee, who had investigated the Frémy-Urbain process with him. Sir Joseph's opinion was that that process was a great step in advance, but that the question depended for ultimate solution upon suitable machinery. The Frémy process, however, did not prove a commercial success. M. Favier devised a fibre-preparing machine,

which stood in the same category. In the Casper system machinery was dispensed with, and only a weak solution of caustic soda was used. The fibre-extracting machines invented respectively by Messrs. H. C. Smith (*C. T. J.* 236, p. 330), W. E. Death, and J. Orr Wallace were then noticed, after which Mr. Nursey described the system of Mr. Henry Ferguson. which he had inspected in operation at Brighouse in 1896. This, he said, was a chemical process, the rhea ribbons being subjected to treatment, first in an alkaline solution, and subsequently in an oleaginous bath. The *filasse* produced was being spun into yarns in the same mill. He inspected the Burrows-Radclyffe system, in operation at Wraysbury, near Staines. Decortication was there effected mechanically, the subsequent treatment being chemical. Yarns were produced from the *filasse* prepared in the mill, and the process was said to be still working satisfactorily. The Gomez, the Macdonald-Boyle, and the Eyssen processes were only referred to in passing, Mr. Nursey having been unable to obtain particulars of those systems. In conclusion, he observed that the preparation of rhea fibre for the spinner had advanced somewhat, albeit very slowly, and he expressed the opinion that the solution of the problem would be found in a combination of mechanical and chemical processes, chemistry stepping in as the handmaid of mechanics.

THE INDIAN INDIGO CROP.

A FORECAST.

THE Department of Agriculture and the North-Western Provinces and Oudh has issued the following final forecast of the Indigo Crop of 1898:—As to area—The dry seasons of 1895 and 1896 were exceptionally favourable for the indigo crop. The yield was unusually good, and the prices realised high. The cultivation of the crop was therefore much extended, the area sown in 1896 being as much as 436,601 acres. In 1897, however, it fell off to 376,899 acres owing to the substitution of food-grains for this crop in consequence of the famine. The season, too, was disappointing. The out-turn is small compared with that of the past few years, besides which prices ruled comparatively low owing to the accumulation of stocks in London, and the invention of a chemical substitute for indigo, alleged to be identical with the natural product. The losses thus sustained have greatly discouraged sowings this year, and the area has further declined to 235,519 acres, of which 153,648 are in the Gangetic Doab, and 81,871 in districts outside the Doab, as compared with 271,123 and 105,776 acres respectively in the year before. The decrease in area planted is 33 per cent. compared with the average area of the last five years, and 37 per cent. compared with that of the preceding year. It closely approximates the area of 1892, which, owing to low prices, had sunk to 206,516 acres. As to condition—The showers of February had greatly helped the germination of the crop, and the plants had a good start; but a large portion was lost through insufficient irrigation and damage from insects during May and June. The rains commenced late and, except in the Meerut division, had been heavy and continuous, especially in the Benares district, where the crop has been very seriously damaged. In tracts where rainfall has not been heavy the crop has escaped serious injury. If 100 be taken to represent a normal crop, the present year's average condition stands as follows:—In the Meerut, Agra, and Allahabad divisions, 75; in the Rohilkhand and Gorakpur divisions, 70; in Oudh, 60; in the Benares division, 45. As to out-turn—In previous years one-fourth of a factory maund was accepted as the average out-turn of dye per acre in a fairly good year, and 10 per cent. of the total area was taken as set apart for seed. Owing to the discouragement which the cultivation of indigo has received this year, it seems that hardly more than 5 per cent. of the crop has been reserved for seed. Adopting therefore the standard of average produce adopted in previous years, reduced in accordance with the condition of the crop as above given, and allowing only 5 per cent. as the area reserved for seed, the total out-turn of dye in the present year would be 39,624 factory maunds (31,191 in the Doab, 8,433 in Benares), as compared with 56,317 maunds estimated last year, and 55,361 maunds exported in 1897-98. This is a decrease of 30 per cent. from the estimated yield of last year, and of 25 per cent. from the average of the past five years.

Liverpool Cold Storage and Ice Co., Ltd.—The directors recommend a dividend for the year ended September 30, after paying interest on debentures, at the rate of £5. per cent. per annum. The transfer books were closed from the 29th ult. until the 12th inst., both days inclusive.

Personal.—Messrs. Joseph Taylor & Co., of Bolton, have in hand solid-plate lead saturators of the latest design for the Nottingham Corporation Gas Department, the Southampton Gas Company, and the Sheffield Chemical Company. Thirteen orders for saturators have been received by the firm during the present year.

THE DECLINE OF BRITISH COMMERCE.

GENERAL *v.* SPECIAL EDUCATION.

MUCH has been heard concerning the backwardness of Great Britain in educational matters, and many unflattering contrasts have been drawn between the German system and our own.

The following special report by Mr. Consul Powell is very opportune, and throws a new light on many aspects of the question. He says:—

The question of living languages is one of the most important, for without that knowledge a commercial nation, though in the first position with regard to her manufactures and goods, must lose much in competition with other nations who possess the gift of tongues. It is always difficult to make a person believe that your goods are the best, but it becomes impossible if you cannot address him in his own language.

I find that foreigners are willing enough to speak English with an Englishman for society purposes, but when it comes to business they prefer their native tongue. Again when there are two applicants for a foreigner's custom, on otherwise equal terms, one who speaks with him in his own language and one who does not, can there be any doubt as to which will successfully carry the business through?

These axioms will hardly be denied, and the question only remains, what is being done upon this matter in Great Britain?*

The great success which has attended German trade since 1873, but more especially during the last 10 years, has been frequently attributed in Great Britain to the superiority of commercial and technical education in Germany. This is not the view taken by those best able to judge of the facts by close acquaintance with them in Germany; they are rather of the opinion that this success is due less to superior commercial education than to the high state of general education that Germany has enjoyed for many years, and which was formerly lacking, and is even now lacking in several essential points, in Great Britain.

I wish in this report to show, to a certain extent, that the British estimation of commercial education in Germany has been somewhat over-rated; not at the present time, because that would be to convey a false estimate of the wonderful strides that commercial education has taken in this country during the last few years. The commercial success of the German nation is

NOT THE OUTCOME OF COMMERCIAL EDUCATION,

the latter is rather itself the offspring of that success, which has opened the eyes of the Chambers of Commerce and municipalities, and latterly of the Imperial Government, to the immense value of commercial education for a commercial people. Therefore the wonderful increase of commercial schools is a result and not one of the causes of the trade successes of Germany.

It may be fairly said that commercial education hardly existed prior to 1877, the time of the Philadelphia Exhibition, when Professor Reuleaux made his celebrated report on the German exhibits, "Billig und Schlecht" (cheap and bad), although it is difficult to state a precise date at which the feeling caused by that remarkable report began to take life amongst the German nation.

The ending of the great war and the prospect of a long peace gave German merchants an impulse to develop and extend their commercial relations, and they gradually became aroused to the fact that their trade could be extended and increased better by men well provided with a purely commercial education, than by those whose training had been only of the usual scholastic nature. For this purpose new methods and means were thought out and suggested by the leading merchants, bankers, and Chambers of Commerce, several of the leading cities of the Empire entered into the project, and eventually the Government directed their attention towards the commercial education question. This led to the founding of certain commercial institutions.

But before dealing with these institutions, I think I had better, in order to make the point clear, show how little had been achieved in this direction prior to the year 1877.

NO ORGANISED SCHEME IN GERMANY.

It would be quite wrong to speak of an organised scheme of commercial education even at the present date in Germany although things are moving in that direction, and we may expect to see the Government take it up as a State question before many years are past, but up to the present such a system has never existed.

The oldest commercial school on the Continent appears to have been that at Lisbon, called "Aula do Commercio," founded in 1759 by Pombal.

A great impulse was given to the cause of commercial education by the foundation of the "Ecole Supérieure de Commerce," in Paris, in 1820, and of the "Offentliche Handelslehranstalt," of Leipzic (founded by Schiebe), in 1831. This Leipzic institution was taken as a model, and is up to the present esteemed as the most excellent of its kind. It

* There seems to be a want in Great Britain of the teaching which in Germany is known as the Realschule, and is practically the grounding for a commercial career. The "Modern side" is something of that nature, but it is not made use of in the same manner as in Germany.

may be remarked as a somewhat singular fact that the large majority of commercial schools were founded outside the kingdom of Prussia. Most of them are in Saxony, Bavaria, Würtemberg, and Baden. It was Saxony that mainly took the lead, with Bavaria a good second.

At Munich there is a commercial school for girls, founded by Reischle, and which I am informed has proved a great success In the kingdom of Würtemberg the most important schools are those at Stuttgart and Pforzheim.

Most of these commercial schools were founded by guilds, associations, or chambers of commerce, which frequently received assistance financially from the town councils, and in the case of Saxony and Würtemberg from Government as already stated.

In Prussia commercial education has heretofore lain almost exclusively in the hands of private individuals, which do not come within the scope of this report. I cannot learn that any of the private establishments at Berlin, Breslau, Magdeburg, Cologne, Hanover, etc., have attained a prominent name.

Mr. Powell then gives particulars of the various schools and the curriculum they follow, in summarising which he says :—

It might be inferred from the preceding details that much has been done in Germany in the direction of commercial education, and especially that the apparently large number of "Kaufmännische Fortbildungsschulen" must have had a very considerable effect, and this view would not by any means be a wrong one, much has been done, but there remains much more to do, and in regard to this point it should be remembered that the exclusively commercial teaching at these comparatively few institutions is very scanty in proportion to the requirements of the Empire. Moreover it is a fact, admitted in the Government report, that the "Kaufmännische Fortbildungsschulen" have not been as well attended as they should be, and the introduction of compulsory attendance has been seriously discussed. In several places this has already been carried out.

It is mostly in the centres of the manufacturing districts that compulsory commercial education of a secondary nature has been more fully recognised as necessary, although it must be admitted that the big centres of commercial activity, Berlin, Stettin, and Leipzic, have hitherto refused to introduce it, no doubt partly in consequence of the large expense entailed and also partly to the circumstance that compulsion has the appearance of a "testimonium paupertatis," of which such corporations as mentioned above would probably feel ashamed.

It is, I think, proved that up to about ten years ago, or possibly a little more, the state of mercantile education in Germany was not a very high one. The great advance in commercial expansion made during these later years is, I feel bound to repeat, due to the superiority of the general education enjoyed for so many years by this Empire, and this combined with profound peace for a quarter of a century has shown that to hold their attained position and to advance it against competition, it has become necessary to instruct young persons going into mercantile business in an entirely commercial curriculum. At present this feeling has manifested itself in spasmodic and isolated efforts: the revising of former foundations and the creating of new ones. In the last ten years, however, and especially within the last two, there has arisen a feeling particularly to be noticed in Central, Southern, and Western Germany that more must be done to promote mercantile education, and that all should be concentrated under a regulating control.

The enlightened German man of business is fully convinced of the necessity of a thorough and special commercial education beside the usual general education given to all. This feeling and tendency which I am convinced is of very recent date, is advancing rapidly from day to day and is fast permeating all commercial circles.

MERSEY AND IRWELL JOINT COMMITTEE.

A MEETING of this Committee was held on Monday in the Board-room, 44, Mosley-street, Manchester, the Right Hon. Sir J. T. Hibbert presiding. At the outset the Chairman referred to some remarks which appeared recently in Liverpool newspapers about the accumulation of Manchester sludge, and also about the refuse passing down the river Irwell. He thought it would be well if, as a matter of information, the Liverpool Corporation and another authority concerned received a copy of the Committee's annual report, in order that they might see what work was done by the Committee. He suggested that a copy of the report should be sent to the Town Clerk of Liverpool and to other authorities concerned. This was accepted as a motion, and having been seconded by Mr. H. Grimshaw, was adopted.

THE ROYAL COMMISSION AND DELAY.

Mr. T. W. Killick, referring to the Royal Commission on Sewage (of which he is a member), said the Chairman of the Commission, in a letter addressed to the newspapers, had drawn attention to the tendency of some manufacturers to postpone the carrying out of works until the report of the Royal Commission has been issued. The Commission thought it desirable it should be known that a considerable time—perhaps some years—must elapse before they could arrive at a final conclusion. It was further stated by the Chairman in his letter that any postponement such as had been proposed, would be viewed by the Commission with the greatest concern. That letter had been criticised from two points of view, one being that the Commission were taking matters "very easily." With regard to that, he pointed out that the Commissioners were all busy men, who lived in different parts of the United Kingdom, but who were ready to attend in London to receive evidence as fast as the evidence could be prepared. Another thing that was said was that the Commission were doing too much. He would like to point out that this matter of sewage treatment and disposal covered a great deal wider ground than it did thirty years ago, and in the evidence already placed before the Commission scientific witnesses of all kinds—chemists and others—had put forward different schemes. It was, therefore, absolutely necessary that the Commission should investigate these schemes for themselves, and therefore, although they had eminent scientific men on the Commission, it had been found necessary to have their own bacteriologist and chemist also, to investigate and to report, not only on the schemes theoretically put before them, but on the various works in actual operation. He would ask the Committee to express their willingness to give such assistance to the experts as lay in their power, and he moved a resolution to that effect.

The Chairman seconded the motion, and said he thought the officers of the Committee ought to be allowed to give the Commission such aid as they could. In putting the resolution he would like to express, on behalf of himself and his colleagues on the Committee, every confidence in the Commission and in its setting to work and doing that work in a businesslike way. He did not think it was a wise thing to attempt to interfere with the work of the Commission or to impose duties on them which they had not been called upon to undertake.

The resolution was carried.

A sub-committee had considered the cases of Middleton and Hyde, and it was intimated that proceedings were pending against the Corporations of both towns. The report of the Clerk on the subject was received and approved.

SOCIETY OF CHEMICAL INDUSTRY.

MANCHESTER SECTION.

THE Manchester Section of the Society of Chemical Industry opened their session on Friday, 4th inst., at the rooms of the Chemical Club in the Victoria Hotel.

Dr. David Watson, who presided, gave an address on the Present Position of Metallurgy. He drew attention to the enormous increase in the production of all metals during the last twenty-five years, and the new uses which had been found for them during that period. The electrician, for example, is responsible for a new and enormous demand for copper, and only recently has the steel trade called for nickel and aluminium. Twenty-five years ago aluminium was a curiosity, whilst to-day it is necessity, being produced at a cost of eighteenpence a pound as compared with forty shillings formerly. Nickel also at that time cost as many shillings a pound as it does pence now. As far as he could see there was every prospect that the annual requirements for the principal metal would continue to grow, and that the supply would not fail. In pointing to the accumulation of metals he remarked that those used in the construction of machinery, railways, ships, buildings, conduits for water and gas, and domestic appliances were in the main permanent and indestructible. Much was no doubt lost by corrosion and abrasion, but that was only a small proportion to what remained. Should the supply therefore be temporarily unable to meet the demand, there was an accumulation of metals which could be drawn upon. The metallurgist was primarily the servant of the miner. What the miner produced was his raw material, and he had to be ready to deal with materials of all kinds of purity and variety. Reviewing the processes employed in the treatment of ores of all the principal metals, Dr. Watson showed that a majority of the processes now in use are identical with or evidently founded upon old methods. Speaking of the newer processes which involve the use of electricity, he observed that at the time when electricians first began to apply the powers of electricity in metallurgy it was expected that the extraction of metals directly from the ores would be largely effected by the electric current, but although electricity was much employed in metallurgy no metals were now being extracted direct from the ores by means of it. It was the business of the metallurgist to refine and combine metals to meet the requirements of the constructor, and in providing for the engineer something better than he had been able to obtain previously, they were encouraged to compete one with another. Metallurgy had charge of that part of chemistry which was concerned with the combinations of the metals with one another; and in illustration of the methods employed in effecting those combinations Dr. Watson exhibited a number of coloured drawings showing the structure of various metals and alloys as when seen through a microscope. After speaking with appreciation of the work of the Alloys Research Committee of the Institute of Mechanical Engineers, which began its work in 1890, he concluded with the obser-

vation that metallurgy was active and progressive both as an art and a science, and that chemists might confidently expect the first few years of the twentieth century to bring the full elucidation of the chemistry of metals.

Trade Notes.

The Owens College Students' Bazaar.—As stated in the *Journal* last August, The Firs estate at Fallowfield, comprising twelve acres of land, having been presented by the Whitworth legatees to Owens College for the purposes of an athletic ground, we would remind our readers that the cost of preparing the ground and building a pavilion will amount to about £5,000. To defray this cost a bazaar is to be held next month in St. James's Hall.

Change of Address.—Messrs. F. A. Putz and Co. ask us to note that they have removed to new offices at 101, Leadenhall-street, London, E C.

A Hint for Sulphate Makers.—One objection, among the farming fraternity, to sulphate of ammonia as ordinarily supplied from gas-works, is that it is not in a sufficiently fine state of division to admit of distribution by means of drills, which is the cheapest way of effectively spreading artificial manures. It is thus placed at a disadvantage as compared with other manures that are specially prepared to meet this requirement. Makers please note !

The Salt Trade.—The official returns of the salt trade of the United Kingdom for last month have just been issued, and disclose a falling off during October, compared with October, 1897, of 6,000 tons, the total exports and coastwise shipments reaching 71,465 tons. The Liverpool, Runcorn, and the Ship Canal dealt with 46,536 tons, a reduction of 3,724. Middlesbrough despatched 11,000 tons, or a decrease of 1,000 tons So far this year 867,000 tons have been shipped from all parts.

"Salamander" Boiler Covering Composition.—The United Asbestos Company, Ltd , of Dock House, Billiter-street, London, and 34, Deansgate, Manchester, have sent us a sample of their improved "Salamander" boiler covering composition. The price is 14s. per cwt., less 25 per cent. for ton lots, delivered. No charge for bags. Immediate delivery can be given from stock. For larger quantities or contracts they offer special discounts. Sectional pipe coverings ("Salamander" brand) are also now made by this firm.

Market Reports.

TAR AND AMMONIA PRODUCTS.

For all practical purposes benzols remain at the same values as last week. There is nothing fresh to report concerning carbolic acids or naphthas, prices being the same as when last quoted. Anthracene is dull in the extreme. Creosote firm. Pitch steady at 25s. f.o.b. East Coast, and 22s. West Coast.

Sulphate of ammonia is on the advance, and with the exception of Beckton (for which there is no quotation), £10. 2s. 6d. may be taken as lowest value at all ports. Throughout the week the demand has been active, and in the face of the favourable statistical position makers have wisely taken advantage of the position.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade a moderate amount of business has taken place both for prompt and forward delivery—values, generally, have a lower tendency, especially in caustic soda and chlorine products, owing to active competition. Bleaching powder is quiet at £4. 10s. f.o.r. makers' works for prompt, and £4. 2s. 6d. to £4. 5s. f.o.r. 1899 contracts. For export £5. 5s. to £5. 10s. per ton, hardwoods, f.o.b. Liverpool. Ammonia alkali is steady at £4. 2s. 6d., bags, f.o r. makers' works. Soda crystals and bicarbonate are unchanged. Salt-cake is firm at 25s. to 26s. per ton in bulk, f.o r. makers' works. Caustic soda nominally unaltered for spot delivery. Current quotations, f.o.b. Liverpool, being as follows:—77%, £7. 15s.; 74%, £7. 10s ; 70%, £7.; 60%, £6. nett, 10 ton lots. Forward, contracts however, are booked at 5s. to 10s. per ton lower. Chlorate of Potash 3½d. to 3¾d. per lb. Soda, 3¾d. per lb. Prussiate of potash firm at 6⅝d. per lb. Cyanide, 98/100%, in good demand at 1s. 1d. per lb. Bichromates steady at 2¼ d. per lb. for soda and 3½d. for potash. Sulphate of copper continues to rise, and quotations are now from £18. to £18. 5s. f.o.b. Liverpool for prompt. In white powdered arsenic business is passing at £16. 10s. Garston. Brown acetate of lime firm at £5. 5s. to £5. 7s. 6d. c.i.f.; grey, £7. 17s. 6d. to £8. per ton. Nitrate of soda rather easier at 7s. 6d. per cwt. Sulphocyanides quiet, but prices are unchanged. Aniline oil and salt are dearer and in more active request. For glycerine values are unaltered, but the market is tolerably active. Acetate of soda rather dearer at £12. to £12. 5s. c.i f. Borax is selling to-day at slightly higher rates, crystal £14. 10s., powdered £15. carriage paid. Ammonia salts are firmer.

REPORT ON MANURE MATERIAL.

The market continues firm in all positions, with a fair amount of business passing. Shippers of high grade Florida rock are finding some difficulty in keeping within contract time, and any surplus parcels available would fetch extreme prices. The position of South Carolina and Algerian rocks is unchanged. There is still nothing to report in River Plate bones, but for East Indian bone meal, Nov.-Dec. shipment, £4. 18s. 9d. per ton, ex quay Liverpool, has been accepted, and this price would still be business for Dec.-Jan. steamer shipment. £5. 6s. 3d. per ton has been realised for crushed East Indian bones for France—a price not obtainable for U.K. Nitrate of soda is steady at 7s. 7½d. per cwt. for good, up to 7s. 9d. per cwt. for fine quality.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 49s. 8d.; Middlesbrough, 49s. cash; and hematite, 56s. 7d. Copper lower: Chili bars, G.O.B.'s and G.M.B.'s, closed at £56. to £56. 5s. cash, and £56. 3s. 9d. to £56. 8s. 9d. three months. Tin easier: Straits closed at £83. 11s. 3d. to £84. 1s. 3d. cash, and £84. 1s. 3d. to £84. 11s. 3d three months; Australian, £84. 5s.; English ingots, £86. 10s. to £86. 15s. Lead easier: Spanish, £13. 6s. 3d.; English, £13. 10s.; Silesian spelter, ordinary, £24. 15s. 0d. Nickel, 1s. 2½d. Antimony, £36. 15s. Quicksilver: First hands, £7. 10s.; second hands, £7. 9s. *Copper shares* steady: Cape, 5⅝ to 5¾; Copiapo, $2\frac{9}{16}$ to $2\frac{11}{16}$; Libiola, $1\frac{15}{16}$ to $2\frac{1}{16}$; Mason and Barry, 3 to 3¼; Rio Tinto, $30\frac{7}{16}$ to $30\frac{9}{16}$; Tharsis, 7⅜ to 7⅝.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is firm in tone, but there is only a moderate business doing. Olive is selling steadily, and prices are well maintained. Linseed firm at 18s. 3d. to 19s. cwt. for Liverpool makes in export casks. Cottonseed steady at 15s. 6d. to 15s. 9d. cwt. for Liverpool refined. Castor oil is rather slow of sale, with good seconds Calcutta at $3\frac{1}{16}$d. to $3\frac{1}{8}$d.; first pressure French $2\frac{15}{16}$d. to 3d., and Madras $2\frac{13}{16}$d. per lb. Tallow is firm, and in fairly good request. Resin firm, and a fair business doing at full prices in all grades. Spirits of turpentine steady at 27s. 3d. cwt. on spot. Petroleum unchanged.

CAKES.—All descriptions continue firm and active. American Western linseed on the spot are still quoted at £7. 7s 6d. to £7. 10s., and there is rather an improved business. Liverpool makes have a good market at £8. to £8. 15s, according to brand, with a good trade passing thereat; whilst in other descriptions previous quotations are repeated for River Plate and Russian. American decorticated cotton-seed are in continued good request at £5. 11s. 3d. to £6., according to quality, and Liverpool makes have a very fair sale at £6, 7s. 6d. to £6. 15s. per ton, according to brand. Liverpool undecorticated makes remain firm at £4. 5s. to £4. 15s. Egyptian are also well held for £4. 7s. 6d. per ton in store, with a fair demand experienced thereat.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS—The linseed oil value is very well maintained, but there is little doing, as will be gathered from the exports, which altogether have only amounted to 19 tons against 93 tons for the same week a year ago. Refined cotton oil is very dull and has receded about 7s.6d. per ton, the export of which has been 240 tons against 402 tons same week a year ago. The stocks of seed held in Hull at the close of last month were—linseed, 208 qrs. against Sept. 1,182 qrs.; rapeseed, 3,525 qrs. against 180 qrs.; cottonseed, 740 tons against 740 tons; whilst the imports during the month have been—linseed, 53,510 qrs. against 57,045 qrs. Sept.; rapeseed, 17,919 qrs. against 2,813 qrs.; cottonseed, 20,597 tons against 10,396 tons. Linseed oil closes quiet, spot, naked, 16s. 6d. per cwt. forward Nov.-Dec., 16s. 4½d.; Jan.-April, 16s. 3d. sellers. Refined and boiled, £1. to £1. 10s. per ton extra. Refined cotton oil closes flat and quoted spot, naked, 12s. 10½d. and the same being accepted to April; casks £1. and barrels £1. 10s. per ton extra. Castor oil is quoted (extracted here), 30s. 6d. per cwt. in barrels; cold drawn, pharmaceutical, 4d. per lb. in cases; pure first pressure, barrels, 28s. per cwt., in cases $3\frac{3}{16}$d. per lb.; seconds 27s. in barrels, in cases $3\frac{1}{16}$d. per lb. Resins hold strong positions, being quoted on the spot from 4s. 9d. to 9s. 6d. per cwt., according to grade. Olive oil, Seville £32. per tun, Candia £32. Olive oil soap unchanged. Cod oils, £16. to £18. per ton. Oleines from £17. 10s. per ton, ex wharf here.

—Markets firm owing to scarcity of seed on the spot. rs are scarce, but deliveries very good upon contracts. kes, 95% pure, £8. 7s. 6d. to £8. 12s. 6d. Oilcakes £7. 7s 6d. to £7. 10s. Russians, £7. 10s. to £7. 15s. kes, best makes, £4. 10s. to £4. 11s. 3d.; seconds, o £4. 7s. 6d.; decorticated, £6. 7s. 6d. to £6. 10s. s, Black Sea, £4. 5s

5.—Business shows a falling off, but open weather improves lemand. White and red leads unchanged. Paints from £9. Mineral dry colours from £3. 10s per ton. Ready mixed £24. in lever tins. Black varnish £5. 10s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

of ammonia has not weakened again after fully entering the , but has had rather an access of strength, fetching within y or two as high as £10 prompt, f.o.b. Leith. The tone of is a very firm one. Sulphate of copper is again dearer, ion being £18 per ton, less 5% Liverpool. Ordinary are on a quiet market, at, as a rule, values unchanged. ments have practically ceased for the season. Despatches to nt are in active movement. In the prices quoted below for ins (scale and wax) the old figures are retained, but the m being one of weakness, has become one of comparative wing to good demand and stiffening of the American prices), s are likely to advance the quotation by ⅛ of a penny per t, perhaps ¼d. The other shale products continue in on as recently improved.

ces current are :—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. ; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, 5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. gow; caustic soda, white, 74° £7. 10s. od., 70/72° , 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liver- ning powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. od.; lish refined, £13. 10s, and boracic acid, £25. nett, Glasgow; of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s.. pool; bichromate of potash, 3½d., less 3½% for Scotch and iveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate d., less 3½% for Scotch and English deliveries (for export, f.o.b. Glasgow); chlorate of potash, 3¾d., less 5% Liverpool; da, 7s. 7½d. to 7s. 9d; sulphate of ammonia, £9. 17s. 6d. to prompt f.o.b. Leith; salammoniac, first and second white, £33. nett, any port; sulphate of copper, £18. 0s. 0d. erpool; paraffin scale, hard, 1⅜d. to 1½d. per lb., and soft .; paraffin wax, 120° semi-refined, 1¾d. to 2d. per lb.; paraffin tha), 7d. per gallon; paraffin oil (burning), No. 1, 6½d.; 7d., at Glasgow and other big centres, for Scotch buyers les a shade lower); ditto (lubricating) 865° £4. 10s. to 85° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. orts of sugar at Greenock were 15,000 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

s are unaltered in price and market is quiet. Exports have better of late. Soda crystals continue steady at £2. 12s. 6d. oss weight, for local consumption, and sulphur scarce at r ton.

powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per caustic soda, 76/77% £8. and 70% £7. 5s. ; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda 4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 0s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of w., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ight; pearl hardening, £3. per ton, nett; pure white sulphate £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; barium, refined crystals, £6. 15s. per ton, nett; alcined, £6. 5s. per ton, nett; carbonate of alumina, £30. t; aluminate of soda, £30. per ton, nett.

South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees. —There is still a steady trade and there is a good demand unker coals. Coke is firm especially for home consumption. follows :—Best Northumbrian steam, 9s. 3d. to 9s. 6d. cond qualities, 8s. 3d. to 8s 6d. per ton; small steam, s. 9d. per ton; gas coals, 10s. to 11s. per ton; bunker d. to 8s. 6d. per ton; household coals, 10s. to 11s. ke, 17s. 6d. to 21s. per ton.

New Companies.

Grozny Synd., Ltd.—CAPITAL £30,000. in £10. shares. This company has been formed to acquire any petroleum or oil-bearing lands in Russia or elsewhere, and to search, bore, mine for, refine, store, distribute, and deal in petroleum, rock oil, coal oil, hydro-carbons, and any of the products thereof. The subscribers to the memorandum of association are :—J. S. Chambers, Osnaburgh House, Osnaburgh-street, N.W., engineer; A. O. Miller, 15, Gt. St. Helens, E.C., accountant; H. Baker, 119, Hollydale-road, Peckham, gentleman; A. K. Roberts, 4, Strathblane-road, Wandsworth Common, gentleman; S. Jordan, 13, Callow-street, Chelsea, gentleman; E Levin, 21, Trinity-road, Wood Green, N., gentleman; J. M. Hickson, 37, Queen's Gardens, Lancaster Gate, W., gentleman.

Anglo-Belgian Fish Oil and Guano Co., Ltd.—CAPITAL £150,500. in £1. shares (500 management). This company has been formed to adopt an agreement with the International Industrial Syndicate, Ltd., and to acquire and turn to account (1) the Belgian patent rights for manufacturing by the Stanley process fish oil and guano from fish and fish offal; (2) certain land at Nieuport, Belgium, with a fish factory; (3) the goodwill of the sardine business carried on there; and (4) about an acre of land adjoining. The subscribers to the memorandum of association are :—H. Fenwick, 16, St. Helen's Place, E.C., secretary; J. M. Darnell, 84, Bishopsgate-street, E.C., contractor; J. S. Macdonald, 66a, Chandos-street, W.C., secretary; G. W. MacAvoy, 7, Inverness Terrace, S W., clerk; H. E. Moore, 3, New Station-road, S. Tottenham, clerk; A. A. Willoughby, 16, St. Helen's Place, E.C., clerk; J. K. Rigby, Mona Cottage, Weston Green, Thames Ditton, C.A. Registered office, 84, Bishopsgate-street Within, E.C.

Chemical Inventions Syndicate, Ltd.—CAPITAL £6,000. in £1. shares. This company has been formed to acquire provisional patent No. 16,220, of July 26th, 1898, and to manufacture, sell, and deal in sulphuric acid and other liquids, and all apparatus and machinery connected with the manufacture of the same. The first subscribers (each with one share) are :—Oscar Guttman, 12, Mark-lane, E.C., consulting engineer and chemist; Joseph F. Fuerst, 17, Philpot-lane, E.C., chemical merchant; Jules Fuerst, 17, Philpot-lane, E.C., chemical merchant; Edward Packard, jun., 155, Fenchurch-street, E.C., chemical manufacturer; George H. Hughes, 155, Fenchurch-street, E.C., agricultural chemist; Mortimer Woolf, Denmark-street, E., manufacturer; and Albert M. Woolf, 52, Priory-road, N.W., gentleman. The first directors are : Edward Packard, jun., and Oscar Guttmann (managing director). Qualification, 300 shares.

Tower Oil Co., Ltd.—CAPITAL £30,000. in £10. shares. This company has been formed to purchase the invention of J. C. E. Bataille, relating to the treatment of oleaginous seeds and fruits, and to carry on the business of oil refiners, seed crushers, etc. The subscribers to the memorandum of association are :—R. G. Butts, Ferriby, merchant; J. P. Shepherd, 389, Beverley-road, Hull, merchant; A. W. Sizer, 39, Field-street, Holderness-road, Hull, seed crusher; Mrs. M. G. Shepherd, 389, Beverley-road, Hull; J. C. E. Bataille, Douai, France, ingenieur; Mrs. S. R. Butts, Ferriby; T. R. Sizer, 11, Franklin-street, Holderness-road, Hull, seed crusher. Registered office, 25, High-street, Kingston-on-Hull.

Ogston & Tennant, Ltd.—CAPITAL £300,000 in £10. shares. This company has been formed to acquire and carry on the business of A. Ogston & Sons, soap, candle, and tallow manufacturers, of Aberdeen, and the business of C. Tennant & Co., soap manufacturers, of Glasgow. The subscribers to the memorandum of association are : A. Ogston, Ardoe, Aberdeen, soap manufacturer; A. G. Ogston, Ardoe, Aberdeen, soap manufacturer; T. Alexander, Brentham Park, Stirling, soap manufacturer; W. Alexander, Brentham Park, Stirling, soap manufacturer; F. Tennant, Wyndford House, N. Berwick, soap manufacturer; H. Tennant, 33, Bruion-street, London, soap manufacturer; J. Ogston, Norwood, Aberdeen, soap manufacturer. Registered office, 80, Tennant-street, St. Rollox, Glasgow.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

E. BOUSTEAD and A. E. FRODSHAM, manufacturers of paint cleansing liquids and detergents, under the style of the Froda Company, Ltd., Liverpool, and Fenchurch-street, E.C.

J. S. MACARTHUR and A. JAMES, consulting chemists, etc., New Broad-street.

E.C., and Glasgow, under the styles of MacArthur & James and the Cyanide Plant Supply Company.

E. Bower, C. L. Bower, and G. de M. G. Hoare, indigo and rubber merchants and dealers, Fenchurch-street, E.C., under the style of Edward Bower and Co., so far as regards E. Bower.

BANKRUPTCY ACTS, 1883 and 1890

Receiving Order.

Vautin, Claude, late Upper Hamilton-terrace, St. John's Wood, N.W., and Old Broad-street, E.C., metallurgist.

IMPORTS OF CHEMICAL PRODUCTS OF THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 29th.

Acetic Acid—

Holland,	50 pks.	R. W. Greeff & Co.
Germany,	15	Phillipps & Graves
Belgium,	25	Leach & Co.

Alkali—

France,	150 c.	J. Barber & Co.
Germany,	601	Spies Brs. & Co.
Belgium,	500	H. Wallace & Co.
U. States,	620	Furness, Withy & Co. Ld.

Alum—

Holland,	882 pks.	J. White
,,	76	W. Balchin, Ld.

Ammonium Bromide—

Germany,	£110	R. W. Greeff & Co.

Antimony Ore—

Sydney,	10 t.	L. & I. D. Jt. Co.
Japan,	20	R. Warner & Co., Ld.
E. Turkey,	128	Hallet & Fry

Arsenic—

Portugal,	368 brls.	Coverly & Westray

Asbestos—

Italy,	£60	A. Laming & Co.
,,	19	Girard Freres
,,	7	London Asbestos Co.
Germany,	95	Craven & Co.
Canada,	100	Asbestos & Asbestic Co.
,,	260	W. Byford

Barytes—

Holland,	22 pks.	Brandram Brs. & Co.
,,	50	W. H. Carey & Sons
,,	40	Hemingway & Co.
,,	110	W. Harrison & Co.
Belgium,	235	,,
,,	82	O'Hara & Hoare
,,	338	J. L. Lyon & Co

Bleaching Powder—

France,	£55	J. M. Steel & Co.

Bleaching Soda—

Germany,	43 pks.	H. Lambert

Bone Meal—

N. Russia,	110 t.	Anglo-Contl. Guano Wks.

Bromine—

Germany,	20 pks.	A. & M. Zimmermann

Caoutchouc—

Straits,	23 c.	W. Pope & Co.
Germany,	15	Wallace Brs.
Portugal,	104	W. M. Smith & Sons
Zanzibar,	82	Hale & Son
E. Indies,	9	H. Devitt & Co
Zanzibar,	135	L. & I. D. Jt. Co.
Straits,	472	E. Boustead & Co.
Sydney,	109	L. & I. D. Jt. Co
Germany,	2	,,
France,	5	H. Johnson & Sons
Straits,	600	H. W. Jewsbury & Co.
,,	387	L. & I. D. Jt. Co.

Carbolic Acid—

Germany,	25 pks.	J. G. Back

Castor Oil—

France,	25 pks.	F. Bochin
E. Indies,	110 cks.	Cayzer, Irvine & Co.

Chemicals *(otherwise undescribed*

Germany,	£276	L. & I. D. Jt Co.
,,	16	Butler's Wf., Ld.
,,	1,187	A. & M. Zimmermann
,,	18	J. Norrenburg & Co.
,,	5	R. W. Greeff & Co
Belgium,	1,256	T. H. Lee
U. States,	14	Williams, Torrey & Co.
Germany,	11	H. Lambert
Belgium	5	R. W. Greeff & Co.
Holland,	16	T. H. Lee
,,	90	Hernu. Peron & Co.
Belgium,	*31*	John Cockerill Line
France,	*2*	*Bennett S. S. Co. Ld*
Germany,	22	Phillips & Graves
Belgium,	12	T. Palmer

Copper Sulphate—

Germany,	18 cks.	Charles & Fox
,,	22	F. Smith

Cream of Tartar—

France,	10 pks.	F. C. Devon & Co.
,,	9	B. & F. Wf. Co. Ld.
Holland,	40	Kirkpatrick, Barr & Co.
France,	20	W. C. Bacon & Co.
,,	2	H. Johnson & Sons

Dyestuffs—

Aniline

Germany,	5 pks.	Butler's Wf., Ld.
France,	3	E. Flageollet & Co.
Holland,	1	Pickford & Co.
,,	4	Brooke, Simpson & Co.
,,	8	A. G. Robinson & Co.

Argols

Italy,	605 pks.	B. Jacob & Sons

Cochineal

Canaries,	15 pks.	W. M. Smith & Sons
,,	21	Swanston & Co.

Cutch

Straits,	1,295 pks.	J. Swire & Sons
,,	5	L. & I. D. Jt. Co.

Divi Divi

E. Indies,	7 pks.	Hoare, Wilson & Co.
,,	101	Baxter & Hoare

Extracts

Austria,	68 pks.	Hoare, Wilson & Co.
U. States,	150	Silbeck Brs.
France,	32	Bennett S. S. Co., Ld.
Austria,	230	Boutcher, Mortimore & Co.
,,	70	Bailey & Leetham, Ld
France,	35	L. J. Levenstein & Sons
Holland,	5	Phillipps & Graves
France,	85	B. & F. Wf. Co. Ld

Gambier

Straits,	400 pks.	J. Swire & Sons
,,	127	J. W. Cook & Co., Ld.
Ceylon,	33	Union L. Co., Ld

Indigo

E. Indies,	24 chts.	J. Karpeles
,,	14	L. & I. D. Jt. Co.

Logwood

B. W. I.,	51 t.	J. Browne & Sons

Myrabolams

E. Indies,	65 pks.	Brown & Elmslie
,,	1,362	W. Shelcott
,,	2,010	H. J. Perlbach & Co.
,,	77	L. & I. D. Jt. Co.

Shumac

Italy,	250 pks.	J. Kitchin, Ld.

Tanners' Bark

Natal,	71 t.	A. & W. Nesbitt
Portugal,	3	H. Devitt & Co.
Natal,	52	Flack, Chandler & Co.
,,	16	Hicks, Nash & Co.

Valonia

A. Turkey,	1 t.	A. & W. Nesbitt
,,	30 6 c.	M. D. Co.

Dyestuffs *(otherwise undes.)—*

U States,	2 pks.	Rosenberg, Loewe & Co.

Farina—

France,	7 pks.	H. Ewald & Co.
,,	1	E. Flageollet & Co.
,,	166	H. Ewald & Co.
Germany,	100	J. Barber & Co.
U. States,	8	Lunham & Moore
Belgium,	2	John Cockerill Line

Glucose—

U. States,	90 pks	540 cwts.	Fellows, Morton & Co.
Canada,	500	500	C. Manfold & Co.
,,	550	794	Ohlenschlager Brs.
,,	150	926	Lon. & Til. Ltge. C. & D. Co.
,,	—	—	R. G. Hall & Co.
,,	500	500	Thames S. T. & L. Co.
,,	500	500	L. & I. D. Jt. Co.
,,	3,250	3,250	Pearce, Pelly, & Co.
,,	500	500	Beresford & Co.
,,	3,000	3,000	E. Thompson & Co.
,,	250	100	Page, Son & East
Germany,	200	200	Trier, Meyer & Co.
U. States,	500	500	Taylor Brs.
,,	500	500	C. Manfold & Co.
Canada,	86	486	R. G. Hall & Co.
,,	20	125	C. Barnard

Glue—

Germany,	£600	Deering & Robottom
France,	31	Mory & Co.
,,	180	Burnett Brs. & Sons
Germany,	70	W. W. Jones & Co.
,,	30	L. & I. D. Jt. Co.
Belgium,	1,240	R. G. Hall & Co.
Austria,	40	J. Greig
Germany,	82	Phillipps & Graves
Holland,	244	T. H. Lee
Belgium,	30	J. E. Kitton
France,	238	Vokins & Co.
U. States,	62	Taylor Brs.
,,	60	Prprs. Dowgate Dk.
N. Russia,	600	M. H. Voss
Belgium,	120	T. M. Duche & Sons
,,	14	Leach & Co.

Glue Stock—

Germany,	45 bls.	Butler's Wf., Ld.
,,	294	Hicks, Nash & Co.
France,	1	E. Flageollet & Co.
Holland,	5	Elkan & Co.
E. Indies,	15	A. & W. Nesbitt
Sydney,	24	Anning & Cobb
,,	131	Culverwell, Brooks & Co.
Germany,	113	W. Balchin, Ld.

Glycerine—

France,	£320	H. Hill & Sons

Guano—

Cape,	805 t.	R. Bensusan & Co
Uruguay,	300	Anglo-Contl. Guana Wks.

Infusorial Earth—

Germany,	£29	Snowdon Sons & Co., Ld.

Iron Oxide—

Austria,	3 pks.	O'Hara & Hoare

Lead Acetate—

Italy,	£50	Bryce & Rumpff

Magnesia—

Holland,	£8	A. & M. Zimmerman

Manure—

Belgium,	1 t.	J. E. Kitton
Uruguay,	5	Anglo-Contl. Guano Works
U. States,	25	Lon & Til. Ltge. C. & D. Co.

Mercury—

Italy,	500 btls.	L. & I. D. Jt. Co.

Methyl Alcohol—

U. States,	37 dms.	H. Wallace & Co.
France,	20 cks.	E. Catlin

Molasses—

U. States,	350 cks. 1,277 c.	Falkenburg & Hesse

Nickel Salts—

Holland,	£35	R. W. Greeff & Co.

Ochre—

Holland,	37 pks.	Phillipps & Graves
France,	20	Wilkinson & Co.
,,	4	O'Hara & Hoare
,,	50	Z. Cartwright, Ld.
Japan,	319	Union Ltge. Co., Ld.

Oelic Acid—

Germany	5 pks.	Butler's Wf., Ld.

Paraffin Scale—

U. States,	1,631 brls.	Anglo-American Oil Co.

Paraffin Wax—

U. States,	100 brls.	H. Hill & Sons
,,	700 cs.	Anglo-American Oil Co.
Belgium,	30 bgs.	A. B. Curtis & Co

Phosphates—

Belgium,	140 t.	Odams Chemical Manure Co.
France,	200	A. Hunter & Co.

Pitch—

Germany,	500 brls.	Fellows, Morten, & Co.
Russia,	500 cks.	,,

Plumbago—

E. Indies,	50 cks.	J. Thredder, Son, & Co.
Germany,	26	B. Gallaway
,,	58	Union Ltge. Co., Ld.
Ceylon,	109 brls.	R. Waters
,,	74	G. R. Haller, Ld.
,,	126	Marshall & French
,,	72	Beresford & Co.
,,	246	J. Thredder, Son, & Co

Potash—

Germany,	£75	L. & I. D. Jt. Co.
,,	23 c.	H. Lambert
,,	30 pks.	Butler's Wf., Ld.

Potassium Bicarbonate—

Holland,	9 cks.	A. & M. Zimmermann

Potassium Chlorate—

France,	100 brls.	Union Ltge. Co., Ld.

Potassium Cyanide—

Belgium,	30 cs.	Blagden, Waugh, & Co.

Potassium Oxychloride—

Sweden.	135 kgs.	G. Boor & Co.

Potassium Sulphate—

E. Indies,	430 pks.	E. H. Wilson & Sons

Pyrites—

Portugal,	950 t.	Mason & Barry, Ld.

Rosin Oil—

France,	250 pks.	C. Price & Co.
Germany,	25 brls.	R. L. Archibald

Salicylic Acid—

Germany,	21 pks.	Butler's Wf., Ld.

Soap—

Holland,	£54	Phillipps & Graves
,,	85	T. H. Lee
Italy,	305	W. Balchin, Ld.
U. States,	25	Oppenheimer & Co.
,,	81	Prod. Brokers' Co., Ld.

Soda—

Holland	10 c.	R. W. Greeff & Co.

Soda Ash—

Holland,	1,000 c.	R. Waters

Sodium Carbonate—

Germany,	5 c.	H. Lambert

Starch—

Holland,	75 pks	Phillipps & Graves
,,	717	Little & Johnston
,,	100	A. G. Robinson & Co.
,,	610	Olyett & Sons
Canada,	160	,,
,,	40	R. G. Hall & Co.
Belgium,	360	T. Ronaldson & Co.
,,	280	T. H. Lee
,,	90	Leach & Co.
,,	120	C. Tennant, Sons, & Co.
,,	80	J. Harrison
Germany,	40	Phillipps & Graves
,,	1,394	Horne & Co.
,,	40	C. Tennant, Sons, & Co.
France,	230	Prprs. Dowgate Dk.

Stearine—

Holland,	68 cks.	H. Hill & Sons
France,	300	G. Boor & Co.

Talc—

E. Indies,	£643	A. B. Curtis & Co.
,,	600	W. M. Smith & Sons
Germany,	136	L. & I. D. Jt. Co
U. States,	40	Knight & Morris
,,	100	W. Dixon

Tannin—

Germany,	9 pks.	R. W. Greeff & Co.

Tar—

N. Russia,	170 brls.	Mordaunt Brs.
Germany,	100	W. Beard & Son

Tartar—

Italy,	23 pks.	Thames S. T. & L. Co., Ld.

Tartaric Acid—
Italy, 10 pks. F. C. Devon & Co.
" 10 Christophersen & Co.
Holland, 7 F. C. Devon & Co.
" 46 B. & F. Wf. Co., Ld.
" 12 Kirkpatrick, Barr, Ld.

Ultramarine—
Holland, 1 pk. W. Harrison & Co.
" 2 Hernu, Peron, & Co.
Belgium, 20 J. Harrison
Germany, 20 Steinhoff, Sons, & Co.

Varnish—
U. States, 24 pks. Lunham & Moore
" 24 J. R. Francis & Co.
Germany, 19 Butler's Wf., Ld.

Vermilion—
Hong Kong, 20 pks. W. M. Smith & Sons

Waste Salt—
Germany, 10 t. Ekman Pulp & Paper Co.

White Lead—
Norway, 4 pks. M. Dk. Co.
Belgium, 122 T. & W. Farmiloe, Ld.
" 38 Perkins & Homer
" 51 J. E. Kitton
Germany, 27 H. B. Alder & Co.
" 13 H. Lambert
" 24 N. J. Fenner & Co.
Austria, 10 Gruscurth & Luboldt
Holland, 40 A. & M. Zimmermann
" 29 Perkins & Homer
" 64 Wilkinson, Heywood, & Co.
France, 17 Soundy & Sons

Wolfram Ore—
Sydney, 5 t. H. Bath & Son
Queensland, 8 Major & Field

Wood Pulp—
Sweden, 420 pks. Alsing & Co., Ld.
" 180 Christophersen & Co.
" 120 Taylor & Co., Ld.
" 174 W. E. Bott & Co.
" 296 M. Dk. Co.
Norway, 4,643 London Paper Mills Co.
Canada, 138 Allan Brs., Ld.
Belgium, 2,058 J. Harrison

Zinc Oxide—
Holland, 20 pks. M. Ashby, Ld.
U. States, 350 "
Germany, 50 Prprs. Dowgate Dk.

LIVERPOOL.

Week ending October 27th.

Acetate of Lime—
New York, 1,087 bgs.

Acetic Acid—
Rotterdam, 27 blns.

Albumen—
Naples, 5 cs.

Aluminium—
New York 269 bxs. T. Ashbury

Aniline Salts—
Rotterdam, 4 cks.

Arachide Oil—
Rotterdam, 2 cks.

Barytes—
Rotterdam, 50 bgs. 75 cks.
Antwerp, 550 34
" 40 J. T. Fletcher & Co.

Bone Ash—
Campana, 355 bgs.

Bone Meal—
Karachi, 7,000 bgs.

Boracic Acid—
Leghorn, 20 cks.

Borate of Lime—
Mollendo, 4,999 sks.

Castor Oil—
Leghorn, 20 cs. H. F. Love & Co.
Calcutta, 302 Ralli Brs.
" 1,430 5 hf. cs.

Chemicals *(otherwise undescribed)*
Hamburg, 11 cs.

Colours—
Hamburg, 2 cs.
Antwerp, 7 cks.
Rotterdam, 24

Cottonseed Oil—
Boston, 8 brls. Morris Beef Co.
Rotterdam, 50

Cream of Tartar—
Bordeaux, 12 cks.
Barcelona, 2 pks. W. Bunten & Co.
" 2 Waddell & Bryson
Tarragona, 5 brls.

Dyestuffs—
Cutch
Rangoon, 200 bxs.
Extracts
Genoa, 12 cs.
New York, 170 brls. McArthur
Philadelphia, 300 bxs.
Colon, 50 cs. D. Midgley & Son
Bordeaux, 32 cks.
Ghent, 20 J. T. Fletcher & Co
Halifax, 55 W. I. Chemical Wks.
Baltimore, 50 brls. McArthur
Fustic
Curacao, 1,550 pcs. Roberts, Evans & Co.
Halifax, 307 E. Chaloner & Co.
Logwood
Hamburg, qty.
Quebracho
Hamburg, 231 bgs.
Shumac
Palermo, 350 bgs. J. Young & Co.
Turmeric
Calcutta, 500 bgs.

Dyestuffs *(otherwise undes.)*—
New York, 7 bls.

Farina—
Hamburg, 24 bgs.

Glucose—
Boston, 150 brls. L. Sutro & Co.
" 50 T. M. Duche & Sons
" 50

Glue—
Boston, 10 kgs. Richardson & Ward
" 24 crts. T. Robinson & Sons
Antwerp, 25 bls.
Rotterdam, 200 bgs. 10 cs.
Hamburg, 60

Glycerine—
Nantes, 20 dms

Lead Acetate—
Hamburg, 1 ck.

Limestone—
Antwerp, 2 crts.

Mica—
New York, 16 brls. Houses Cement Co.

Naphtha—
Philadelphia, 8,847 pks.

Ochre—
Antwerp, 2 brls.

Paint—
Boston, 51 cs.

Paraffin Scale—
New York, 259 cs. Thompson & Bedford
Rangoon, 78 bxs.
Baltimore, 300 brls.

Paraffin Wax—
Rangoon, 75 cs.

Phosphates—
Antwerp, 504 bgs.
Ghent, 250 t.
Brunswick, Ga., 2,027
Baltimore, 1 bg. W. Smith
" 112 bgs. Balfour Williamson

Plumbago—
Genoa, 100 bgs.

Potash—
Rotterdam, 10 cks
Rouen, 53 Co-op. W'sale Society, Ld.
Hamburg, 88

Pumice Stone—
Messina, 26 cks. / 20 bgs.

Pyrites—
Huelva, 1,610 t. Matheson & Co.

Salt (Waste and Block)—
Hamburg, 203 bgs. & qty.

Saltpetre—
Karachi, 300 bgs.
Hamburg, 20 cks. / 5 kgs.

Soap—
Rotterdam, 102 cs.

Soda—
Genoa, 20 brls.

Sodium Nitrate—
Iquique, 9,150 pks.

Starch—
Boston, 349 bgs. Walden & Behham
Rotterdam, 60 cs. Browne, Geveke & Co.
" 126
Antwerp, 365 32 bxs. J. T. Fletcher & Co.
" 64
Boston, 200 sks.
Montreal, 500 bgs.

Stearine—
Antwerp, 25 bgs.

Sulphur—
Catania, 167 cks. Allan Brs. & Co.
" 158 t. 134 brls. / 350 bgs. / 133 cks.

Tallow—
New York, 300 tcs. 26 hds. 197 brls.
Boston, 245
Paysandu, 135 pps. 4 hf. pps.
Campana, 227 cks

Tar—
Uleaborg, 1,072 brls. 600 hf. brls.

Tartar—
Naples, 6 cks.

Tartaric Acid—
Rotterdam, 2 cks.

Ultramarine—
Rotterdam, 20 cks. 20 cs.
Hamburg, 1

Varnish—
Rotterdam, 3 ckr.

White Lead—
Rotterdam, 11 cks. 6 brls.

Zinc Oxide—
Antwerp, 80 brls.
Hamburg, 25 cks.

Zinc White—
Rotterdam, 10 cks.

MANCHESTER.

Week ending October 29th.

Acetic and Oxalic Acids—
Rotterdam, 10 blns.

Alizarine—
Rotterdam, 64 cks. 1 cs.

Aniline Oil—
Rotterdam, 8 cks.

Aniline Salts—
Rotterdam, 33 cks.

Antimony Salts—
Hamburg, 10 cks.

Arachide Oil—
Rotterdam, 1 ck.

Asbestos—
Rotterdam, 2 bls.

Barytes—
Hamburg, 4 cks.

Beta-Naphthol—
Rotterdam, 1 brl.

Caustic Potash—
Rouen, 20 dms.

Chemicals *(otherwise undescribed)*
Hamburg, 15 cks. 12 cs.
Rotterdam, 1

Colours—
Antwerp, 22 brls. / 10 cs.
Ghent, 7
Rotterdam, 2 kgs 31 brls. / 59 cks. 39 cs.

Cream of Tartar—
Rotterdam, 20 cks.

Extracts—
Rouen, 12 cks.

Farina—
Hamburg, 200 bgs.

Gelatine—
Hamburg, 1 cs.
Rouen, 20

Glue—
Antwerp, 1 ck.
Rotterdam, 20 bgs.

Glycerine—
Hamburg, 2 dms.

Indigo—
Rotterdam, 7 chts.

Limestone—
Antwerp, 8 cs. 2 frms.

Lithopone—
Rotterdam, 44 cks.

Madder—
Rotterdam, 1 ck.

Manganese—
Antwerp, 3 brls.

Oxalic Acid—
Hamburg, 16 cks.

Phosphates—
Antwerp, 20 cks.

Potash—
Hamburg, 49 cks.
Rotterdam, 5

Potassium Prussiate—
Hamburg, 20 cks.

Pyrites—
Huelva, 1,810 t.

Soap—
Rotterdam, 4 cs.

Sodium Nitrate—
Rotterdam, 18 cks.

Starch—
Antwerp, 1,116 cs.
Rotterdam, 151

Stearine—
Antwerp 19 bgs
Rotterdam 26 bls

Sulphuric Acid—
Rotterdam, 21 cks

Tannic Acid—
Hamburg, 8 cks. 9 cs.

Tartar—
Hamburg, 5 kgs.

Tartaric Acid—
Rotterdam, 10 kgs. / 3 cks.

Tartar Emetic—
Hamburg, 9 cks.

Ultramarine—
Rotterdam, 4 cks. 5 cs.

White Lead—
Rotterdam, 20 cks.

Wood Pulp—
Gothenburg, 1,208 bls.
Rotterdam, 52
Sundswall, 5,520

Zinc Oxide—
Rotterdam, 82 brls.

Zinc Sulphate—
Rotterdam, 4 brls.

Zinc White—
Rotterdam, 85 cks

HULL.

Week ending October 29th.

Aniline Oil—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.

Barytes—
Rotterdam, 44 cks. Hull & Netherlands S. S. Co.

Bleaching Fluid—
Hamburg, 3 cks. Bailey & Leetham, Ld.

Bone Meal—
Kurrachee, 2,502 bgs.

Chemicals *(otherwise undescribed)*
Antwerp, 171 pks. Wilson, Sons, & Co., Ld.
Dunkirk, 20 "
Hamburg, 9 cks. "

Colours—
Antwerp, 40 cks. Bailey & Leetham. Ld.
" 19 pks. Wilson, Sons, & Co., Ld.
" 20 bgs.
Dunkirk, 3 cs. "
Ghent, 25 brls. "
Rotterdam, 11 cks. 1 cs. "
" 14 10 / 204 pks, 11 brls. Hull & Netherlands S. S. Co.

Cream of Tartar—
Bordeaux, 8 cks.

Cryolite—
Copenhagen, 2 cks. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 39 brls. Hull & Netherlands S. S. Co.
Extracts
Bordeaux, 50 cks.
Logwood
Hamburg, 205 bgs. Wilson, Sons, & Co., Ld.

Dyestuffs *(otherwise undes.)*—
Antwerp, 216 bgs.

Farina—
Harlingen, 50 bls. Hull & Netherlands S. S. Co.

Glucose—
Rotterdam, 40 bgs. Hull & Netherlands S. S. Co.

Glue—
Christiansund, 1 brl. Wilson, Sons, & Co., Ld.
Dunkirk, 48 cks. Wilson, Sons, & Co., Ld.
Ghent, 5 ,,
Rotterdam, 6 bgs. Hull & Netherlands S. S. Co.
3 bls.

Glue Stock—
Antwerp, 54 bls. Wilson, Sons, & Co., Ld.

Lead Acetate—
Hamburg, 3 cks. Tudor & Sons

Limestone—
Antwerp, 1 cs. Bailey & Leetham, Ld.
,, 3 Wilson, Sons, & Co., Ld.

Litharge—
Rotterdam, 6 cks. Hull & Netherlands S. S. Co.

Phosphates—
Dunkirk, 614 bgs.

Rosin—
Antwerp, 15 cks.
Hamburg, 5 brls.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 1 ck. ,,

Soda—
Ghent, 250 bgs. Wilson, Sons, & Co., Ld.

Starch—
Amsterdam, 50 bgs. Hull & Netherlands S. S. Co.
120 cs.
Antwerp, 40 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 101 bgs.

Tallow—
Dunkirk, 328 cks. Wilson, Sons, & Co., Ld.
Hamburg, 12 cs. ,,

Tar—
Drontheim, 2 brls. Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 23 cks. Hull & Netherlands S. S. Co.

Ultramarine—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
1 cs.

White Lead—
Rotterdam, 77 cks. Hull & Netherlands S. S. Co.

Wood Pulp—
Bergen, 207 pks. Wilson, Sons, & Co., Ld.
Christiania, { 75 / 150 bls. ,,
Drontheim, 800 ,,

Zinc Ashes—
Stockholm, 14 brls. Wilson, Sons, & Co., Ld.

Zinc White—
Amsterdam, 10 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending November 3rd.

Acetic Acid—
Rotterdam, 10 carbys. J. Rankine & Son
Rouen, 9 cks.

Asbestos—
New York, 500 bgs.

Barytes—
Rotterdam, 16 cks. J. Rankine & Son
10 pks.

Bleaching Powder—
Rotterdam 90 cks. J. Rankine & Son

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. J. Rankine & Son

Colours—
Rotterdam, { 22 brls. / 8 bxs. / 229 pks. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 5 cks. J. Rankine & Son
29 brls.
Aniline
Rotterdam, { 32 brls. / 7 bxs.
Aniline Colours
Amsterdam, 2 cks. J. Rankine & Son
1 cs.
Cutch
Havre, 31 cs.
Indigo
Rotterdam, 10 brls. J. Rankine & Sons

Farina—
Delfszyhl, 1,524 bgs. J. Rankine & Son

Glucose—
Hamburg, 36 cks.
Montreal, 50 brls.

Manganese Chlorate—
Rotterdam, 8 cks. J. Rankine & Son

Ochre—
Rouen, 35 cks.

Oxalic Acid—
Hamburg, 6 cks.
Rotterdam, 6 J. Rankine & Son

Potash—
Hamburg, 20 cks. 62 dms.
Rotterdam, 10 J. Rankine & Son

Pyrites—
Huelva, 2,110 t. Tharsis Sulphur & Copper Co.

Rosin—
Baltimore, 250 brls.

Salt—
Hamburg, 2 cs.

Soda—
Rouen, 1 cs.

Saltpetre—
Hamburg, 50 cks.

Starch—
Baltimore, 1,370 bgs.
New York, 900 bxs.
Rotterdam, 38 cs. J. Rankine & Son

Stearine—
Amsterdam, 63 bgs. J. Rankine & Son

Tallow—
New York, 50 brls.

Tartar Emetic—
Hamburg, 2 cks.

Tartaric Acid—
Rotterdam, 2 cks. J. Rankine & Son

Waste Salt—
Hamburg, { 1,250 bgs. / 254 cks.

White Lead—
Rotterdam, 20 cks. J. Rankine & Son

Wood Pulp—
Christiania, 2,053 bls. 20 cs.
Gothenburg, 177 rolls
Hamburg, 998 bls.

TYNE.

Week ending October 29th.

Alkali—
Amsterdam, 1 ck.

Asbestos—
Hamburg, 30 bgs. Tyne S. S. Co.

Barytes—
Antwerp, 300 bgs. Tyne S. S. Co.
Rotterdam, 400 ,,

Calcium Carbide—
Antwerp, 1 dm. Tyne S. S. Co.

Caoutchouc—
Hamburg, 1 ble. Tyne S. S. Co.

Colours—
Rotterdam, 1 cs. Tyne S. S. Co.

Gelatine—
Hamburg, 2 cs. Tyne S. S. Co.

Lithopone—
Rotterdam, 10 cs. Tyne S. S. Co.

Manganese Ore—
Hamburg, 10 cs. Tyne S. S. Co.

Sodium Sulphate—
Moss, 255 t. 2 c.

Starch—
Antwerp, 100 cs. Tyne S. S. Co.
Rotterdam, 60 ,,

Wood Pulp—
Christiania, 250 bls.
Hamburg, 80 pks. Tyne S. S. Co.

Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.

Zinc White—
Rotterdam, 100 cks. Tyne S. S. Co.

GOOLE.

Week ending October 26th.

Alizarine—
Rotterdam, 165 cks. 6 cs. 2 pks.

Aniline—
Hamburg, 10 cks. 1 cs.
Rotterdam, 228 37

Antimony—
Boulogne, 3 cks.

Barytes—
Antwerp, 100 bgs.

Caoutchouc—
Boulogne, 23 cks.

Colours—
Hamburg, 4 cs.

Dyestuffs *(otherwise unascribed)*
Amsterdam, 5 cks.
Boulogne, 49 87 pks.

Farina—
Delfszyhl, 20 bgs.
Hamburg, 300

Glucose—
Hamburg, 28 cks.

Glue—
Boulogne, 1 ck. 3 cs. 13 bls.

Glycerine—
Hamburg, 4 dms.

Indigo—
Rotterdam, 3 brls.

Logwood—
Hayti, 580 t.

Ochre—
Calais, 36 cks.
Dunkirk, 96

Potash—
Calais, 92 dms.

Potassium Sulphate—
Dunkirk, 11 cks. 12 dms.

Saltpetre—
Hamburg, 30 cks.
Rotterdam, 70 bgs.

Starch—
Ghent, 134 bxs.

Stearine—
Rotterdam, 63 bgs.

Tartar—
Rotterdam, 2 cks.

Yarnish—
Hamburg, 2 cks.

Zinc Oxide—
Hamburg, 5 cks.

GRIMSBY.

Week ending October 29th.

Barytes—
Rotterdam, 100 bgs.

Caoutchouc—
Antwerp, 7 cs.
Hamburg, 2
Rotterdam, 1

Chemicals *(otherwise undescribed)*
Hamburg, 5 cks. 8 cs.
Rotterdam, 18

Colours—
Antwerp, 6 cks. 150 pks.
Hamburg, 47 30 cs. 102
Rotterdam, 8 2

Dyestuffs *(otherwise undescribed)*
Antwerp, 214 bgs.
Hamburg, 1 cs.

Farina—
Hamburg, 50 bgs.

Glue—
Hamburg, 1 ck.

Indigo—
Rotterdam, 7 cs.

Manure—
Esbjerg, 570 bgs.

Starch—
Antwerp, 90 cs.

Waste Salt—
Hamburg, 1,000 bgs.

Zinc Ashes—
Rotterdam, 5 cks.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 2nd.

Acids—
Rockhampton, 12 pks. £29

Alkali—
Rio de Janeiro, 6 c. £7
Durban, 1 t. 18 42

Ammonia—
Durban, 6 c. £30
Cologne, 40 dms. 353
Mauritius, 9 cs. 27

Ammonium Carbonate—
Cologne, 4 t. 2 c. £100
B. Ayres, 2 62
Rouen, 5 10 135
Paris, 1 18 48
Cork, 25 cks. 170

Ammonium Chloride—
Cologne, 20 cks. £89
Auckland, 1 t. £22
Sydney, 1 2 c. 30
Constantinople, 2 116

Ammonium Sulphate—
Dunkirk, 101 t. £975
Colombo, 5 4 c. 55

Arsenic—
Calcutta, 10 t. £185
Gisborne, 1 15 c. 33

Basic Slag—
Cape Town, 194 t. 11 c. £326

Bisulphite of Lime—
Durban, 1 t. 11 c. £20

Bleaching Powder—
Napier, 2 t. 5 c. £15

Borax—
Sydney, 57 pks. £51
Rotterdam, 50 cks. £75

Carbonic Acid Gas—
Pt. Elizabeth, 6 cs. £46

Caustic Soda—
Normanton, 5 t. 4 c. £37
Beira, 5 6
Pt. Elizabeth, 4 8 85
Matla, 4 dms. 12
Marseilles, 24 cks. 50

Chemicals *(otherwise undescribed)*
E. London, 16 pks. £36
Townsville, 48 13
Hamburg, { 10 kgs. / 1 ck. 92
Cologne, 13 cks. 2 brls. 62
Melbourne, 14 cs. (pt.) 14 pks. (pt.) 68
Treport, 23 cks. 100
Yokohama, 10 kgs. 29
Montreal, 8 cs. 65
Antwerp, 2 25
Napier, 19 pks. 31
Galatz, 8 40
Pt. Elizabeth, 55 44
Sydney, 26 17
Durban, 33 87
New York, 31 [illegible]
Karachi, 200 [illegible]
Malta, 3 cks. 5
Cape Town, 2 14

Citric Acid—
Durban, 1 c. 67
Montreal, 6 34
Yokohama, 25 [illegible]
Libau, 3 kgs. 20

Coal Products—
Alizarine
Boston, 74 cks. £[illegible]

Aniline
Otago, 1 cs. £14
Rotterdam, 12 dms. 360
New York, 32 915
Anthracene
Cologne, 405 cks. £784
Benzol
Boulogne, 50 cks. £95
Rotterdam, 2 dms. 10
Carbolic Acid
Rouen, 2 cks. £14
Montreal, 5 16
San Francisco, 5 38
Cologne 25 100
Riga, 48 257
Hamburg, 25 dms. 6
Creosote
Bordeaux, 80,976 galls £425
St. Malo, 22,600 213
New York, 1,000 cks. 3 cs. 713
Creosote Salts
Philadelphia, 1,143 bgs. £319
Dyes
Boston, 5 cks. £46
Boulogne, 3 11
Genoa, 5 40
Naphthaline
Cologne, 17 cks. £149
Hamburg, 10 87
Calcutta, 2 7
Pitch
Madras, 20 brls. £16
New York, 250 cks. 130
Philadelphia, 250 130
Boston, 300 130
Dunkirk, 200 t. 450
Aviles, 1,400 1,663
Antwerp, 241 296
Ruamo, 399 350
Marseilles, 1,123 1,404
Montreal, 100 cks. 20
Mauritius, 4 12 dms. 9
Pyridine
Cologne, 12 cks. £100
Tar
Hamburg, 170 brls. £75
Ruamo, 930 runlets 554
Cologne, 200 cks. 137
E. London, 10 dms. 23
Adelaide, 50 9
Pt. Elizabeth, 500 16
Wellington, 25 5
Toluol
Treport, 18 cks. £93

Coal Products *(otherwise undes.)*—
Mahe, 18 pks. £7
Cape Town, 12 cks. 50 dms. 14
Brisbane, 200 47

Copper Sulphate—
Pt. Elizabeth, 9 c. £8

Cream of Tartar—
Melbourne, 2 t. 10 c. £183
Gisborne, 3 11
Rockhampton, 1 82
Wellington, 12 43

Disinfectants—
Sydney, 6 pks. £40
Jamaica, 12 dms. 15
Wellington, 6 cs. 26
Calcutta, 6 17
Bombay, 4 30 26
Rockhampton, 6 pks. 22
Colombo, 63 58
Pt. Elizabeth, 152 78
Durban, 59 150
Hamburg, 107 dms. 23

Manure—
Cape Town, 25 t. £80
Durban 26 16 c. 142
Jersey, 100 578
Bordeaux, 20 65

Phosphoric Acid—
Demerara, 42 cks. £132

Potash Salts—
Townsville, 40 cs. £438

Potassium Bicarbonate—
Philadelphia, 1 t. 7 c. £36

Potassium Cyanide—
Delagoa Bay, 10 t. £1,010
Townsville, 12 2 c. 1,391
Durban 10 1,167
Sydney, 1 4 15
Melbourne, 3 37
New York, 690 cs. 4,09
Fremantle, 10 117

Potassium Prussiate—
New York, 30 cks. £574

Saltpetre—
Colombo, 1 t. 5 c. £25
Santos, 4 9 94
Pt. Elizabeth, 1 21
Wellington, 1 5 26
Lyttelton, 10 10

Sheep Dip—
M. Video, 15 t. 7 c. £290
Lyttelton, 30 cks. 40 dms. 113
Jamaica, 30 14
Cape Town, 100 19
Pt. Elizabeth, 11 1,000 137
Rio Gallegos, 12 186 pks. 506
B. Ayres, { 5 3 37 dms. / 89 t. 13 cs. } 2,641
Delagoa Bay, 153 cs 100 dms. 69
Napier, 8 c. 6

Soda—
Auckland, 1 t. £13
Pt. Elizabeth, 4 9 c. 15
Rotterdam, 5 9 30

Soda Crystals—
Pt. Elizabeth, 7 t. 6 c. £22

Sodium Bicarbonate—
Durban, 1 t. 13 c. £12
Jamaica, 2 10 13
Rockhampton, 1 6
Townsville, 5 2 35

Sodium Carbonate—
Boston, 15 cs. £36

Sodium Prussiate—
Boston, 10 t. £361
Montreal, 32 cks. 478

Sodium Silicate—
Malta, 5 t. £24

Sodium Sulphate—
Ghent, 50 t. £75

Sulphur—
Calcutta, 5 t. £35
Townsville, 2 c. 8
Pt. Elizabeth, 4 9 36

Sulphuric Acid—
Colombo, 19 pks. £33

Superphosphates—
Colombo, 5 t. 2 c. £19
Jersey, 77 245

Tartaric Acid—
Gisborne, 4 c. £23
Rockhampton, 5 27

LIVERPOOL.

Week ending November 2nd.

Alkali—
New York, 5 t. 4 c. £42
Calcutta, 1 18 8
Leghorn, 9 19 3 q. 40
Lisbon, 9 10 38
Bourgas, 9 2 36
Piræus, 6 5 3 50
Salonica, 5 1 20
Vera Cruz, 16 3 40
Wellington, N.Z., 5 3 3 20
Auckland, 5 2 1 20
Sydney, 4 9 16
Newcastle, 8 7 1 50

Alum—
San Francisco, 20 t. £100
Bombay, 16 83
Montreal, 36 18 c. 1 q. 103
Genoa, 2 3 1 20
Syra, 1 17 9
Madras, 19 3 5
Alexandretta, 36 cks. 82

Ammonia—
Coquimbo, 5 c. 1 q. £14

Ammonium Carbonate—
Oporto, 16 kgs. 10 cks. £33
Antwerp, 5 11
Genoa, 20 5 brls. 34
Rotterdam, 10 c. 13
New York, 2 t. 15 1 q. 68
Venice, 1 19 3 54
B. Ayres, 18 2 27
Hamburg, 1 33
Montreal, 10 12
M. Video, 9 2 18

Ammonium Chloride—
Alexandria, 1 t. £56
Smyrna, 3 18 c. 138
Trieste, 1 13 1 q. 52
Naples, 1 31
Tampico, 3 5
Kustendji, 4 132
Karachi, 1 12 2 47
Montreal, 9 14 163
Barcelona, 2 16 51
Adelaide, 10 15

Ammonium Sulphate—
Gd. Canary, 17 t. £170
Valencia, 46 1 c. 3 q. 434
Gandia, 62 12 1 676
Genoa, 20 188
Castellon, 29 16 298
Tarragona, 10 90
Cadiz, 5 50
Sourabaya, 140 1 1,365
Nantes, 10 1 2 101
Las Palmas, 75 5 75
Lisbon, 30 5 202
Philadelphia, 51 510
Bilbao, 9 15 88

Anthracene—
Rotterdam, 34 t. £330

Antimony Sulphide—
Boston, 8 cks. £'55

Basic Slag—
Nantes, 201 t. 13 c. £303

Bleaching Powder—
Baltimore, 146 cks.
Bilbao, 31
Boston, 710
Detroit, 46
E. St. Louis, 20
Ghent, 76
Montreal, 84
Newport News, 74
New York, 356 20 dms.
Palermo, 5
Philadelphia, 162 crts.
Rotterdam, 28
Toronto, 15
Vera Cruz, 140

Boracic Acid—
Montreal, 1 t. 12 c. 3 q. £41
Hamburg, 1 1 27
Gefle, 1 1 25

Borax—
Fiume, 5 t. £80
Charlotte Town, 5 c. 4
Hamburg, 20 8 1 q. 290
Callao, 10 8
E. London, 3 10 53
Yokohama, 6 17 101
Dantzig, 10 7
Havana, 4 3
Galatz, 10 7
Gibraltar, 5 4
Antwerp, 1 14
Dunedin, 14 14
Sydney, 3 42
Wellington, N.Z., 10 7
Montreal, 24 18 1 343
Vera Cruz, 7 10 3 97
Gibraltar, 9 6
Stettin, 1 15
Constantinople, 2 3 25
Rosario, 19 2 16
Victoria, B.C., 2 27

Calcium Chloride—
Melbourne, 10 t. £21
Odessa, 39 19 c. 84

Carbolic Acid—
Yokohama, 7 t. 10 c. £429
Hamburg, 1 1 67
Rotterdam, 10 8 260
Rouen, 5 11 2 q. 316
Philadelphia, 7 cs. 50
Alexandria, 2 7
Lagos, 30 dms. 24

Caustic Liquor—
Rotterdam, 1 t. 1 c. 2 q. £6

Caustic Potash—
Sydney, 1 t. £30

Caustic Soda—
Alexandria, 36 dms.
Adelaide, 88 10 cs.
Amsterdam, 513
Antwerp, 103 5 cks.
Auckland, 35
Barcelona, 160 160 pks.
Beyrout, 18
Bilbao, 10
B. Ayres, 125
Calcutta, 75
Catania, 25
Chicago, 50
Cienfuegos, 12 bls.
Cuidad Bolivar, 6
Corfu, 30
Corunna, 10
Dantzig, 6
Demerara, 20
Dunedin, 13
E. St. Louis, 25 10 15 bxs.
Fairwater, 135
Fremantle, 4
Galatz, 465
Gefle, 7
Genoa, 125
Hamburg, 21
Hiogo, 229
La Guayra, 12
Limon, 30
Lisbon, 183
Louisville, 100
Madrid, 50
Malta, 30
Melbourne, 80
Mexico City, 230
Messina, 50
M Video, 50
Montreal, 440 50 pks.
Nagasaki, 100
Naples, 20
Newcastle, 6
N. Orleans, 100
New York, 85 25 cs.
Odessa, 155
Oporto, 65
Penang, 30
Philadelphia, 50
Piræus, 75
Puerto Cabello, 10
Rotterdam, 145
Salaverry, 25
Seville, 314
Stettin, 80
Stockholm, 10
Tarragona, 30 cks.
Toronto, 100
Vigo, 15
Volo, 100
Venice, 75
Winnipeg, 175

Chemicals *(otherwise undescribed)*
Stettin, 10 c. £13
New York, 5 t. 3 140
Rotterdam, 1 17 1 q. 29
Montreal, 5 17 3 80
Hamburg, 17 1 13
Santander, 10 4 2 140
Philadelphia, 13 5 360
Madras, 10 916
Galatz, 10 kgs. 16
Samsoun, 2 brls. 6
Piræus, 3 cks. 19
Alexandretta, 8 33
Bremen, 4 14
Karachi, 10 49
Bombay, 25 118

China Clay—
Baltimore, 350 t.
Boston, 789 cks.
Calcutta, 40
Montreal, 450
Pernambuco, 40
Philadelphia, 450
Trieste, 500

Chromic Acid—
Hamburg, 10 c. £30

Citric Acid—
Manila, 1 c. £7
Bombay, 3 2 q. 15
B. Ayres, 7 2 50

Coal Products—
Aniline Oil
Boston, 6 kgs.
St. Petersburg, 10 dms.
Aniline Salts
Alexandria, 2 cks.
Genoa, 8
New York, 41
Piræus, 5
St. Petersburg, 14
Smyrna, 32
Creosote
Bordeaux, 250 brls.
Vera Cruz, 17 cks.
Naphtha
Durban, 4 crts.
Pitch
Ibrail, 20 brls.
Sherbro, 5
Alexandria, 11 cks.
Tar
Hamburg, 86 brls.
Ibrail, 30
St. Petersburg, 56

Copper Sulphate—
Cape Town, 8 t. £136
Bordeaux, 4 17 c. 85
Madras, 11 9
Galatz, 1 18
Marseilles, 5 1 q. 85
Nantes, 11 6 3 192
Piræus, 1 16
Rouen, 7 12 127
Genoa, 9 18 3 175
Messina, 2 16 1 48
Catania, 15 5 3 243
Palermo, 2 16 3 48
Colombo, 10 8
Sydney, 3 53
Victoria, B.C., 1 10 1 25

Disinfectants—
Shanghai, 10 dms. £16
Cadiz, 14 c. 3 q. 32
Kingston, 5 11
Malta, 9 15
St. John's, Nfd., 1 1 8

Dyestuffs—
Aniline Colours
New York, 11 cks.
Philadelphia, 5 brls.
Valleyfield, 8 bgs.
Extracts
Barcelona 6 cks.

Beaubarnois, 29
Cornwall, 72
Hamilton, 140
St. Stephen's 55

Indigo
New York, 10 cks.

Dyestuffs (*otherwise undescribed*)
Ghent, 1 ck. 1 dm.
Lisbon, 1 2 cs.

Glycerine—
Santander, 12 c. 3 q. £22
Rotterdam, 10 t. 18 3 608
Constantinople, 5 15
Hiogo, 2 65
Yokohama, 11 12 405

Glycerine Lye —
Hamburg, 23 t. 14 c. 2 q. £970

Hydrochloric Acid—
Coquimbo, 3 c. 2 q. £6

Lead Acetate—
St John's, N.B., 4 c. £6

Magnesia—
Bilbao, 4 t.
Constantinople, 2 cs.
Havana, 6
Lisbon, 10

Magnesium Chloride —
Rouen, 9 t. 19 c. 2 q. £23
Syra, 1 dm. 5

Magnesium Sulphate—
Montreal, 75 brls.
Vancouver, 10 kgs.

Manure—
Santa Cruz, 31 t. £260
St. John's, Nf'd. 4 9

Nitric Acid—
Coquimbo, 6 c. 2 q. £17

Oxalic Acid—
San Francisco, 3 t. 5 c. £57

Paint—
Alexandria 7 pks.
Alicante, 68 dms.
Antwerp, { 46 / 41 pks.
Arecaibo, 200 kgs
Belize, 135
Bilbao, 25 cks. 23 dms.
Bombay, 12 kgs.
Bremerhaven, 1 ck. 1 tub
B. Ayres, { 1 5 cs. / 35 kgs.
C. Hatien, 2 cks.
Cartagena N.G. 19
Delagoa Bay, 150
Gibraltar, { 1 25 / 138 kgs. 123 pks.
Hamburg, 63
Havana, 9 cks. 10
Jeremie, 12
Lisbon, { 9 2 / 74 kgs. 1 brl.
Manaos, 17 cks.
Malta, 20 kgs.
New York, 20 cks.
Para, 1 cs.
Pernambuco, 130 kgs.
Piræus, 4 bxs.
Ponce, 2 cks.
Pt. Said, 176 kgs.
St. John's, 2 brls.
San Juan, 65
Santos, 8 cks.
Stettin, 12
Sulina, 2
Trieste, 44 dms.
Vera Cruz, 8
Yokohama, 176

Painters' Colours—
Calcutta 20 kgs 60 cs.
Constantinople, 433
E. London, 2
Malta, 300
M. Video, 16 cks. 22
New York, 133
Para, 30 tcs 12 brls.
Rangoon, 30 dms.
Rotterdam, 45 cks. 6 cs. 133 pks.
San Francisco, 269 kgs.
San Juan, 42
San Sebastian, 20 cks.
Toronto, 32
Vancouver, 8 kgs.

Paraffin Wax—
Genoa, 5 bgs.
Smyrna, 15

Phosphorus—
Hiogo, 5 t. 5 c. £1, 03
Vera Cruz, 4 58
Havana, 9 3 q. 112
Nagasaki, 1 210
Shanghai, 2 10 413

Potassium Bicarbonate—
New York, 1 t. 1 c. 1 q. £28

Potassium Carbonate—
Manaos, 4 c. £4

Potassium Chlorate—
New York, 22 t. 10 c. £671
Naples, 1 15 53
Rotterdam, 1 19 59
Antwerp, 5 8
Asuncion, 10 15
Philadelphia, 26 15 480
Boston, 10 300
San Luis Potosi 15 26
Stettin, 2 10 70
Oporto, 1 34
Melbourne, 2 56
Odessa, 51 1,656
Kalmar, 3 90
Hamburg, 5 150
Libau, 15 450
Shanghai, 2 10 85

Potassium Cyanide—
Rio de Janeiro, 3 t. 4 c. 2 q. £280
Tal Tal, 2 205

Potassium Fluoride—
New York, 1 c. £8

Salt—
Aarhuus, 170 t.
Accra, 13
Ambrizette, 4
Amsterdam, 192
Antwerp, 250
Baltimore, 365
Barbadoes, 300 bgs.
Batanga, 7
Bilbao, 18 c.
Boston, 210
Brussels, 100 cs.
B. Ayres, 5 7 c.
Calcutta, 3,446 50 cs.
Callao, 16 14 c.
Cameroons, 48 17
Cape C. Castle, 11 13
Casamance, 50
Chicago, 202
Christiania, 775
Degama, 50
Ghent, 478
Halifax, 1,615
Hamburg, 1 0¾
Lagos, 50
Manila, 13 cs.
Montreal, 917 2 c.
N. Orleans, 230
New York, 50 300 sks.
Old Calabar, 2,250 bgs.
Opobo, 80 13
Pt. Natal, 2,200
Providence, 10 pks.
Rio G. do. Sul, 1 19
Rio Nunez, 200 15
Rosario, 8
Rotterdam, 300
St. Petersburg, 3 6
Salt Pond, 12½
San Francisco, 125
Sao Paulo, 3 17
Savannah, 350
Sierra Leone, 620
Singapore, 15
Victoria, 30
Wellington, 10

Salt Cake—
New York, 5 t. 18 c. £89
Baltimore, 40 66
Delagoa Bay, 4 18 12

Saltpetre—
Victoria, B C., 10 c. £10
Parnahyba, 1 t. 3 58

Sesquioxide of Iron—
Montreal, 4 c. £8

Sheep Dip—
M. Video, 20 cks. 250 dms. £131

Silicate of Iron—
Boston, 4 t. 9 c. 1 q. £16

Soap—
Alexandria, 160 bxs. 9 cs.
Algoa Bay, 335
Antwerp, 151 1,800
Attaboe 30
Axim 400
Baltimore, 25
Bata, 10
Belize, 695
Benin, 150
Bermuda, 50
Boma, 250
Bombay, 100 2
Boston, 1
B. Ayres, 20
Burutu, 1
Cabenda, 4
Cadiz, 1
Calcutta, 55 250 bdls.
Cameroons, 60
C. C. Castle, 424 bxs.
Cape Town, 1,000
Constantinople, 5 brls.
Delagoa Bay, 150
Delhi, 10 cs.
Dominica, 32
Galata, 30
Genoa, 10
Gibraltar, 580
Johannesburg, 2
Kurrachee, 1,026
Lagos, 100
Landana, 45
Madeira, 5
Madras, 10
Manila, 2
Manaos, 1,030
Marseilles, 12
Mauritius, 200
Menado, 200
New York, { 4 brls. 11 cks. / 102 cs.
Noqui, 40
Ocos, 20
Old Calabar, 612
Para, 1,050 100 bdls.
Penang, 400
Piræus, 23
Pt. Natal, 885
Rawal Pindi, 19
Rangoon, 1,450
Reunion, 500
Rio Del Rey, 100
Rotterdam, 466
St. John's, 1,250
St Lucia 182 80
San Juan, 100
Savannah, 50
Shanghai, 2
Singapore, 2,764
Smyrna, 25
Sourabaya, 500
Stockholm, 320
Sydney, 16 tanks
Toronto, 884
Trinidad, 2,000
Wellington, 5 pks.
Yokohama, 2
Zanzibar, 250 bdls.

Soda Ash—
Adelaide, 40 bgs. 267 cks.
Amsterdam, 750
Antwerp, 1,200
Bahia, 25 brls.
Baltimore, 17
Barcelona, 136
Boston, { 970 809 pks. / 58 cks.
Brussels, 300
Calcutta, 58
Callao, 10
Calmar, 29
Catania, 20
Constantinople, 50
Copenhagen, 250 2
Corfu, 25
Dunedin, 64
Genoa, 650 25
Gothenburg, 450 68
Hamburg,
Leghorn, 100
Lisbon, 200 10
Maranham, 10
Montreal, 500
Newport News, 34
Norrkoping, 137
Oporto, 25
Philadelphia, 1,540 25 tcs.
Rotterdam, 19
Toronto, 80
Trieste, 100
Venice, 50 kgs.
Zante, 133 brls.

Soda Crystals—
Amsterdam, 25 brls.
Boston, 280
B. Ayres, 56
Calcutta, 33 kgs.
Demerara, 3
Galatz, 20
Gibraltar, 50 30
Halifax, 75
Malta, 115
Montreal, { 150 bgs. 664 pks. / 485 kgs.
Newcastle, 100
Piræus, 39
Quebec, 455
Rotterdam, 50

Sodium Bicarbonate—
Adelaide, { 140 kgs. 50 brls. / 20 bgs.
Algoa Bay, 170
Amsterdam, 20 kgs.
Antwerp, 240
Barcelona, 75
Bilbao, 5
B. Ayres, 100 kgs. 100 cks.
Calcutta, 2,500
Catania, 36 4
Cuidad Bolivar, 100
Colombo, 14
Fiume, 15
Galatz, 34 34
Genoa, 20 4
Gibraltar, 20
Halifax, 100 dms.
Hamburg, 75 5 cks.
Hamilton, 10
Havana, 6
Havre, 28
Malta, 14
Melbourne, 700
M. Video, 20
Montreal, { 300 bgs. 100 dms. / 300 kgs. 25 cks.
Naples, 30
Nantes, 12
Rotterdam, 30 20
St. John's, 100 dms.
Vancouver, 130

Sodium Bichromate—
Piræus, 16 cks.

Sodium Carbonate—
Antwerp, 10 kgs.

Sodium Chlorate—
Hamburg, 40 kgs.

Sodium Hyposulphite—
Montreal, 130 kgs.

Sodium Oxide—
Leghorn, 5 cs.

Sodium Sulphate—
Barranquilla, 2 cks.
Burnley, 30
Rotterdam, 41 brls.

Starch—
Lisbon, 2 cks.

Sulphur—
Alexandria, 5 t. 2 c.
Gothenburg, 40
Montreal, 150 6
M. Video, 15
Natal, 1 12

Sulphuric Acid—
Pernambuco, 1 t. 5 c.
San Juan, P. R., 3 cs.

Superphosphates—
Adelaide, 90 t.
Cape Town, 500
Castillon, 947 bgs.
Gandia, 204
Las Palmas, 25 t.
Malaga, 50
Nantes, 156 17 c.
Oporto, 50
Valencia, 25 3 3 q.

Yarnish —
Abounourgas, 2 cs.
Adelaide, 3 dms.
Alexandria, 4
Antwerp, 14 cks.
Bilbao, 3
Boma, 8 brls.
Cape Town, 9 cs.
Genoa, 6
Landana, 4 brls.

White Lead—
Bahia, 3 t. 6 c.
New York, 200 bgs.

Zinc Chloride—
Bombay, 2 t. 17 c. 1 q.

Zinc White—
Rouen, 2 t. 7 c. 1 q.

MANCHESTE

Week ending November 2n

Ammonium Chloride—
Alexandria, 20 cks.

Ammonium Sulphocyanide—
Montreal, 1 kg.

Aniline Colours—
Germany, 21 cks. 1 cs.

Caustic Soda—
Aracaju, 30 dms

Chemicals (*otherwise undescri*
Alexandria, 86 brls.
Beyrout, 25
Tripoli, S., 30
Montreal, 100 kgs.
Rotterdam, 5 cks.

Coal Products—
Aniline Oil
Belgium, 2 dms
Germany, 22

Beta Naphthol
Belgium, 4 brls.
Naphthylamine
Germany, 33 cks.
Pitch
Belgium, 5,698 c.
Switzerland, 1,134
Colours—
Belgium, 1 kg.
Germany, 1 ck.
Glue—
Holland, 16 cks.
Glycerine—
Belgium, 2 dms.
Germany, 48 carbys.
Montreal, 2
Paraffin Wax—
Mollendo, 10 bls. 2 cs.
Potassium Bichromate—
Montreal, 29 cks.
Soap—
Alexandria, 90 bxs.
Holland, 40 cs.
Sodium Arseniate—
Montreal, 11 cks.
Sodium Bicarbonate—
Beyrout, 35 kgs.
Montreal, 20 cks.
Sulphur—
Montreal, 1,068 bgs.
Tin Crystals—
Montreal, 7 cks.
Zinc Ashes—
Belgium, 1 bg.

HULL.

Week ending October 29th.

Alkali—
Bergen, 4 cks.
Uleaborg, 15
Ammonium Sulphate—
Bordeaux, 670 bgs.
Basic Slag—
Gothenburg, 1,020 bgs.
Bleaching Powder—
Boston, 87 cks.
Stettin, 21
Caustic Soda—
Abo, 1 ck. 18 dms.
Chemicals (*otherwise undescribed*)
Abo, 2 cks.
Antwerp, 8
Bombay, 356
Christiania, 5 cs. 14 pks.
Christiansund, 1
Copenhagen, 36
Drontheim, 15
Gothenburg, 20 34 366 slbs. 1,776 pks.
Hamburg, 19 151
Kurrachee, 654
New York, 87
Rotterdam, 11 152
Rouen, 20
St. Petersburg, 10
Wasa, 3
Cottonseed Oil—
Amsterdam, 200 c.
Antwerp, 641
Gothenburg, 130
Hamburg, 442
Harlingen, 42
Konigsberg, 152
Rotterdam, 1,635
Rouen, 366
Stavanger, 7
Stettin, 83
Dyestuffs (*otherwise undescribed*)
Christiania, 4 cks.
New York, 6
Glucose—
Bergen, 1 ck.
Glue—
Hamburg, 5 bls.
Linseed Oil—
Amsterdam, 164 c.
Antwerp, 135
Christiania, 140
Christiansand, 36
Christiansund, 72
Drontheim, 90
Hamburg, 504
Kurrachee, 42
Manure—
Copenhagen, 1,528 bgs.
Naphthaline—
Riga, 121 bgs.
Paint—
Ghent, 1 ck.
Painters' Colours—
Abo, 9 cs.
Antwerp, 12 cks.
Bombay, 3 59 104 pks.
Boston, 20
Christiania, 1 3
Christiansand, ½ 104
Copenhagen, 5
Drontheim, 20 dms.
Dunkirk, 1
Ghent, 52
Gothenburg, 4 1
Hamburg, 10
Konigsberg, 8
New York 215 1 60 pks.
Rotterdam, 16
Rouen, 40
Stettin, 18
Phosphates—
Bordeaux, 251 t.
Pitch—
Antwerp, 299 t.
Rouen, 50 cks.
Salt—
Amsterdam, 20 cks.
Sheep Dip—
Bombay, 5 cks. 300 dms.
Slag Meal—
Christiansand, 10 t.
Soap—
Bergen, 1 cs.
Hamburg, 3
Stockholm, 2
Tallow—
Gothenburg, 5 cks.
Hamburg, 5
St. Petersburg, 60
Tar—
Antwerp, 11 cks.
Bergen, 1
Christiansand, 5
Hamburg, 25
Stettin, 5
Wasa, 1
Turpentine—
Antwerp, 10 cs.
Drontheim, 2 cks.
Varnish—
Antwerp, 3 cs.
Bombay, 40 dms.
Kurrachee, 1
Stockholm, 1 ck. 7

GLASGOW.

Week ending November 3rd.

Ammonium Sulphate—
France, 60 t. 10½ c.
Hamburg, 50 13
Asbestos—
E. London, £28
Valparaiso, 237
Barytes—
Gothenburg. £30
Bleaching Powder—
Dunedin, 9 t. 12¾ c.
Borax—
Rotterdam, £212 14s.
Caustic Soda—
Dunedin, 5 t. 8½ c.
Montreal, 15 4
Chemicals (*otherwise undescribed*)
Rotterdam, £20
Coal Products—
Benzine
France, £384
Creosote Oil
France, £3,718
Naphtha
Dunedin, £30 16s.
Pitch
Venice, £1,744
Tar
Karachi, £118
Rangoon, 51
Tar and Pitch
Canada, £350
Extracts—
Canada, £174
Farina—
Oporto, £70
Glue—
Dunedin, £29
Linseed Oil—
Dunedin, 1 t. 10¾ c.
Port au Prince, 2 13
Valparaiso, 5 16½
Litharge—
Johannesburg, 1 t.
Logwood—
Lyttelton, £33 10s.
Manganese Oxide—
New York, £205
Manganese (Recovered)—
Basle, £105
Rouen, 52
Paint—
Shanghai, £45
Singapore, 103
Valparaiso, 308
Painters' Colours—
Auckland, £49
Boston, 366
Cape Town, 62
Dunedin, 24
Hong Kong, 66
New Plymouth, 180
Oporto, 38
Rangoon, 69
Rotterdam, 19
Singapore, 113
Wellington, 112
Paraffin Wax—
Christiania, £30
E. London, 30
France, 45
Hiogo, 390
Hong Kong, 20
Paris, 30
Rio de Janeiro, 110
Stockholm, 10
Phosphoric Acid—
Demerara, £34
Potassium Bichromate—
Antwerp, £241
Hiogo, 600
Paris, 216
Rouen, 354
Potassium Prussiate—
U.S.A., £321
Sheep Dip—
Wellington, £94
Soap—
Singapore, 15 t. 1¾ c.
Sodium Bichromate—
Antwerp, 19 c.
Cincinnati, 4 t. 16¾
Gothenburg, 1 7¾
New York, 3 3
Rouen, 17 10
Sodium Nitrate—
Demerara, 21 t.
Starch—
Rotterdam, £42
Sulphuric Acid—
Rangoon, £387
White Lead—
Bombay, £20
Invercargill 72
Zinc Ashes—
Rotterdam, 10 t. 5¼ c.

TYNE.

Week ending October 29th.

Alkali—
Christiania, 1 t. 13 c.
Hamburg, 5 7
Muhlgraben, 99 19
Rotterdam, 8 14
Alum Cake—
Montreal, 20 t.
Antimony—
Hamburg, 12 t.
Pt. Hope, 1
Riga, 1
Rotterdam, 12
Barium Carbonate—
New York, 80 t.
Bleaching Powder—
Amsterdam, 61 t. 1 c.
Antwerp, 15 16
Bergen, 18
Christiania, 22 9
Drontheim, 10 3
Hamburg, 9 4
Riga, 20
Rotterdam, 13 11
Castor Oil—
Montreal, 10 t. 2 c.
Caustic Soda—
Amsterdam, 17 t. 6 c.
Copenhagen, 4 7
Montreal, 33 9
New York, 66 13
Riga, 57 11
Colours—
Hamburg, 9 c.
Extracts—
Bergen, 6 c.
Fluor Spar—
New York, 95 t.
Litharge—
Amsterdam, 13 c.
Copenhagen, 3 t.
Montreal, 26 8
Riga, 30 1
Magnesia—
Antwerp, 16 c.
Hamburg, 8
Manure—
Valencia, 175 t.
Naphthaline—
Riga, 34 t. 9 c.
Paint—
Antwerp, 15 c.
Rotterdam, 15
Painters' Colours—
Antwerp, 1 bx.
Soda—
Amsterdam, 30 t. 4 c.
Christiania, 13 9
Rotterdam, 20
Sodium Hyposulphite—
Hamburg, 15 t.
Montreal, 10
Sodium Sulphate—
Muhlgraben, 45 t. 12 c.
Sulphur—
Christiania, 350 t.
Copenhagen, 10
White Lead—
Bergen, 1 t. 4 c.
Montreal, 66 11
Randers, 2 12
Riga, 2 12

GOOLE.

Week ending October 26th.

Caoutchouc—
Ghent, 10 cs.
Chemicals (*otherwise undescribed*)
Amsterdam, 19 cks.
Coal Products (*otherwise undes.*)—
Amsterdam, 84 cks.
Boulogne, 1
Ghent, 6 1 cs.
Rotterdam, 11 2
Dyestuffs (*otherwise undescribed*)
Hamburg, 19 cks.
Rotterdam, 1
Manure—
Ghent, 74 bgs.
Painters' Colours—
Amsterdam, 1 ck.
Ghent, 10
Pitch—
Antwerp, 877 t.

GRIMSBY.

Week ending October 29th.

Alkali—
Hamburg, 12 cs.
Caoutchouc—
Esbjerg, 1 bg.
Chemicals (*otherwise undescribed*)
Dieppe, 3 cs.
Gothenburg, 1 ck.
Malmo, 2
Coal Products (*otherwise undes.*)—
Dieppe, 95 cks.
Hamburg, 72 cs.
Colours—
Malmo, 10 cks.
Dyestuffs (*otherwise undescribed*)
Dieppe, 1 bg. 1 cs.
Malmo, 1
Manure—
Antwerp, 2 cks.
Esbjerg, 2,010 bgs.
Hamburg, 56
Painters' Colours—
Antwerp, 5 cks. 5 cs. 1 dm. 1 pk.
Rotterdam, 2 kgs. 8 cks. 24

PRICES CURRENT.

WEDNESDAY, Nov. 9, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may var

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	32	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	2	6
,, ,, (grey) Hull .. .. ,,	10	2	6
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	17	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8¾
,, 50/90 ,, ... ,,	0	0	9
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	7
,, (liquid 95/97%) .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1½
Copper .. .. per ton	56	3	9
,, Sulphate .. .. ,,	18	0	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	28	0	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	10	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	17	0	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0

	£	s.	
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	
,, ,, (grey) (ex ship) .. .. ,,	7	17	
Magnesium (ribbon and wire) .. .. per oz.	0	2	
,, Chloride (ex ship) .. .. per ton	2	16	
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton	9	10	
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	
Manganese, Sulphate .. .. ,,	17	0	
,, Borate .. .. per cwt.	2	2	
,, Ore, 70% .. .. per ton	3	10	
Methylated Spirit, 61° O.P .. .. per gallon	0	2	
Naphtha (Wood), Solvent .. .. ,,	0	2	
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	
Oils:—			
Cotton-seed .. .. per ton	15	15	
Linseed .. .. ,,	18	10	
Stearine .. .. ,,	25	0	
Phosphorus (Yellow) .. .. per lb.	0	1	1
,, (red) .. .. ,,	0	2	
Potassium Bichromate .. .. nett ,,	0	0	
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	
,, Chlorate .. .. per lb.	0	0	
,, Cyanide, 98 % .. .. ,,	0	1	
,, Hydrate (Caustic Potash) 90 % .. per ton	22	5	
,, ,, ,, 75/80 % .. ,,	17	15	
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	
,, Nitrate (refined) .. .. ,,	19	15	
,, Permanganate .. .. per cwt.	2	15	
,, Prussiate Yellow .. .. per lb.	0	0	
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	
,, Muriate, 80 % ,, ... ,,	8	15	
Silver (metal) .. .. per oz.	0	2	
Sodium (metal) .. .. per lb.	0	2	
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	7	
,, Acetate (ex-ship) .. .. ,,	12	5	
,, Arseniate, 45 % .. .. ,,	13	0	
,, Chlorate .. .. per lb.	0	0	
,, Borate (Borax) .. .. nett per ton	14	10	
,, Bichromate .. .. ,, per lb.	0	0	
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	15	
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	10	
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	
,, Bicarbonate .. .. ,,	6	10	
,, Hyposulphite .. .. ,,	5	5	
,, Manganate, 25 % .. .. ,,	15	0	
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	
,, Nitrite, 98 % .. .. per ton	25	0	
,, Phosphate .. .. ,,	10	0	
,, Prussiate .. .. per lb.	0	0	
,, Silicate (glass) .. .. per ton	4	10	
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	
,, Stannate, 40 % .. .. per cwt.	2	15	
,, Sulphate (Salt-cake) .. .. per ton	1	6	
,, ,, (Glauber's Salts .. .. .. ,,	1	7	
,, Sulphide .. .. ,,	7	5	
,, Sulphite .. .. ,,	4	15	
Strontium Hydrate, 100 % .. .. ,,	10	15	
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	
,, Barium, 95 % .. .. ,,	0	0	
,, Potassium .. .. ,,	0	0	
Sulphur (Flowers) .. .. per ton	7	7	
,, (Roll Brimstone) .. .. ,,	6	3	
,, Brimstone: Best quality .. .. ,,	4	12	
Superphosphate of Lime (26 %) .. .. ,,	2	10	
Tallow .. .. ,,	23	10	
Tin Crystals .. .. per lb.	0	0	
,, English Ingots .. .. per ton	86	10	
Zinc (Spelter) .. .. ,,	24	15	
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	
,, Sulphate, Crystal .. .. ,,	6	7	

THE

CHEMICAL TRADE JOURNAL

AND

OIL, PAINT and COLOUR REVIEW.

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ATE ADVERTISEMENT.

TENDER.

TO CHEMICAL MANUFACTURERS.

THE Corporation of Birkenhead are prepared to receive Tenders for the purchase and removal of about 350 Tons of SPENT OXIDE OF IRON, now lying at their Gas Works.

Forms of tender and samples may be obtained from Mr. T. O. Paterson, Gas Engineer, Gas Works, Thomas-street.

Tenders, sealed and endorsed "Tender for Spent Oxide of Iron," to be sent to me not later than 5 p.m. on Friday, 9th December, 1898.

The Corporation do not bind themselves to accept the highest or any tender.

By order,

Town Hall, Birkenhead, 18th Nov., 1898.

ALFRED GILL, Town Clerk.

Notices.

All communications for the *Chemical Trade Journal* should be addressed, and Cheques and Post Office Orders made payable to—

DAVIS BROS., 32, Blackfriars Street, MANCHESTER.

Our Registered Telegraphic Address is—

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NATIONAL TELEPHONE, **3060.**

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Yearly (52 numbers) ..... 12s. 6d.
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Communications for the Editor, if intended for insertion in the current week's issue, should reach the office not later than **Tuesday morning.**

Articles, reports, and correspondence on all matters of interest to Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

Advertisements.

Prepaid Advertisements of Situations Vacant, Premises on Sale or To be Let Miscellaneous Wants, and Specific Articles for Sale by Private Contract are inserted in the *Chemical Trade Journal* at the following rates:—

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Each additional 10 words..... 0s. 6d. "

Advertisements of Situations Wanted are inserted at one-half the above rates when prepaid viz. —

30 Words and under ..... 1s. 0d. per insertion.
Each additional 10 words..... 0s. 3d. "

CURRENT TOPICS.

TRADE INTERESTS *v.* PUBLIC SAFETY.

JUST when the majority of thinking people, endowed with an average amount of common sense, have come to the conclusion that the recommendations of the late Petroleum Committee were sufficiently wise, without being irksome, to secure the support of all members of Parliament who are free agents, a last death struggle is about to be made by those whose trade interests, *i.e.*, personal profits, have depended on the unrestricted sale of dangerous low-flash lamp oil.

In accordance with the precedents of past history, a final effort is being made to raise an agitation in the retail oil trade.

Years back trade interests won the day, and the public paid the penalty by the loss of hundreds of lives and thousands of pounds' worth of property. To-day, through the Metropolitan Grocers and Oilmen's Association, the trade is once more trying to unload itself upon the British public; but the latter have over paid the piper too long, and unless he can play good music at a fair price they will prefer to contribute their pennies to the grinder of the piano-organ.

On Wednesday this week the members of the above trade met in solemn conclave to "prevent the passing of the *harassing* legislation proposed!" The harassing element has its being entirely in the determination of the Petroleum Committee that only safe oil shall be sold to the public, and then by persons who can guarantee storage and hawking facilities that will ensure the public safety.

We do not blame this Association for their action in the matter. It is natural for them to act as they have done, when we take into account the aspect in which the situation has doubtless been laid before them. This stirring up of the retail trade as soon as actual legislative changes are imminent is so characteristic of the American oil *clique* that it is not difficult to detect the squirming of the octopus's sinuous tentacles under the cloak of the retail traders' indignation.

But this game is played out. We no longer care either for Parliaments or Trade Associations, because the safe oil which these agitators wish to starve out of existence is selling to-day all over the country; and the public have not failed to grasp the advantages of a safe oil at a fair price.

The American low-flash advocates have good cause for anxiety, since fresh sources of oil are being developed with great rapidity and at a profit. Only this week a Russian company, that can supply plenty of high-flash oil, has declared a dividend of 35 per cent; while one of several good wells has been spouting at the rate of 16,000 tons of crude oil per day. Besides being thus provided with abundant supplies of crude, the company is in a position to take immediate advantage of the improved market for refined products. In addition to this exceptional Russian activity, the brilliant

prospects of the Roumanian oil fields, as forecasted some months ago, have been confirmed this week in unreserved terms by one who should be thoroughly capable of estimating their worth.

With these facts in the possession of the public, the American producers who are so anxious to supply the poor man with their dear and dangerous oil must try other means than boycotting and bluff if they are to be successful in hoodwinking the oil consumers of this country.

THE SEPTIC SYSTEM AND THE L. G. B.

There is likely to be some mirth (and possibly some unparliamentary language) amongst local authorities before the Local Government Board has finished its "hedging" tactics over the septic treatment of sewage and land filtration of effluents.

Recently the Penrith Urban District Council respectfully asked for the "views" of the L. G. B. on the adaptability of the septic system for their district, owing to the difficulties of purchasing suitable land for filtration purposes. The Board has replied to the effect that they have had the septic method of treatment under consideration, and the main principle which has so far been established is that, if the septic system is adopted, it is necessary that the effluent from the tanks and filters should be subjected to further treatment on land before being allowed to pass into a watercourse. The Board have also come to the conclusion that the septic system can only be regarded as an experimental substitute for an ordinary process of chemical precipitation. They would not, therefore, be prepared to entertain any proposal for the adoption of that system in connection with a scheme of sewerage for the urban district unless provision were made in the scheme for the purification of the effluent from the tanks and filters on a sufficient area of land. Of course, they require the District Council to accept the entire responsibility of the experiment, and to undertake (if it fails) to adopt in its place some process of treating the sewage with chemicals combined with artificial filtration.

In other words the septic system means for a certainty compulsory purchase of land. After chemical treatment *artificial filtration* will suffice. How long is it since the Board refused to sanction the combined use of chemical precipitation and artificial filters, and insisted on land—six months? Now they commend the former combination. And why may not artificial filters be used for septic effluents? Why?

THE ROYAL SOCIETY'S MEDALS.—The medals awarded by the Royal Society for distinguished contributions to science have this year fallen as follows:—Royal medals to the Rev. John Kerr, F.R.S., and Mr. Walter Gardiner, F.R.S.; Copley medal to Sir William Huggins, F.R.S.; Rumford medal to Professor Oliver Lodge, F.R.S.; Davy medal to Professor Johannes Wislicenus; and Darwin medal to Professor Karl Pearson, F.R.S.

DYNAMITE IN THE TRANSVAAL.—The discontent in the Transvaal anent the dynamite monopoly received an additional fillip recently when the news was received in Johannesburg that De Beers have lately concluded a contract with Nobel's Trust by which they will get dynamite No. 1 delivered at Kimberley for 37s. 6d. per case. The Cape Government duty of 12s. 6d. bringing the total cost up to 50s. At Johannesburg, dynamite No. 1 costs 75s. per case at the manufactory, and transport to the mine costs about 2s. 6d. There can be no question, as the *Statist's* special correspondent at Johannesburg says, that Nobel's make a satisfactory profit on the price charged to De Beers, though the latter only use about 15,000 cases a year, and the mine is 485 miles from port. Nobel could therefore deliver at much less than 37s. 6d. in Johannesburg, where the annual consumption is about 250,000 cases, and constantly increasing, and with a railway mileage of only 396 from the nearest port.

FURTHER SUBSIDENCES AT NORTHWICH.

A SERIOUS subsidence occurred at Northwich on Tuesday afternoon last. Shortly before 1 o'clock the caretakers of the builders' yard belonging to Messrs. Peter Taylor and Sons, off London-road, heard an ominous rumble. Rushing out, they found cracks betokening a subsidence extending in every direction. The roadway itself gradually began to sink, and the house and offices of Messrs. Taylor leaned still further from the perpendicular over the road. This thoroughfare is a Cheshire County Council main road. Owing to its treacherous character it was "timber decked" some years ago, and the macadam built upon the woodwork. It was now apparent that the timber had given way. Within half an hour the centre of the depression was fully four feet below the normal road level, while deep fissures extended on either side. By two o'clock the road for a distance of fully forty yards was impassable. Vehicles were unable to move, and a great amount of traffic was brought utterly to a standstill owing to the fact that on Monday the old Town Bridge was closed, and the London-road and Navigation Swing Bridge were the only alternative route to Chester. As the area of sinkage extended, great crowds of people gathered to watch. The tiled footpaths collapsed, and only the framework and bolting prevented Messrs. Taylor's house and offices from tumbling into the roadway. As the vehicular business of the district was becoming completely disorganised, the Urban Council sought an interview with the engineer of the River Weaver Navigation. A portion of the old bridge had been broken up, but this was roughly replaced with all speed, and before three o'clock it was possible to reopen the central portion of the bridge. The district surveyor of the County Council was also summoned, and before nightfall a temporary road had been opened nearer the river's edge. The depression was some eight or nine feet deep by four o'clock, and the bottom rapidly filled with water. The Bridge Inn and Messrs. Taylor's buildings, from which the furniture had been hurriedly removed and which had been vacated by the tenants, were four feet out of the perpendicular, but, thanks to the peculiar construction of the premises, they remained intact. Their total demolition seemed, however, to be only a question of time. Wooden stables on the opposite side of the road seemed in a like condition at nightfall, and the "broken" road presented a singular appearance. A space of 100 yards was barricaded off. Watch fires were lighted and watchmen placed on duty. Of course the gas and water mains and the electric cable are dislocated, but an alternative line of pipes has prevented the Leftwich side of the district being left without water or gas. Unquestionably, with the exception of the subsidences on the confines of the district which engulfed acres of land, the present sinkage is the most alarming of many years past.

PENNY POSTAGE TO INDIA.—It is officially announced that the Government of India have decided to join in the scheme of Imperial penny postage from the beginning of its operation on December 25 next.

THE CHEMICAL SOCIETY BANQUET.—Friday evening last week was the date chosen for the postponed banquet to the six ex-presidents of the Chemical Society, the guests of the evening being Sir Henry Gilbert (partner with Sir John Lawes in the famous agricultural experiments at Rothamstead), Sir Edward Frankland (one of the pioneers of organic chemistry, and father of Dr. Percy Frankland, the bacteriologist), Professor Odling, Sir Frederick Abel, Dr. A. W. Williamson (Emeritus Professor at University College, and famous for his work on etherification), and Dr. J. H. Gladstone (the author of important works on optical chemistry and other branches of science). The names were originally to have included also that of Lord Playfair, whose sudden death last June caused the banquet to be postponed (*Vide C.T.J.*, 577, p. 398).

PRIZE BARLEY FERTILISER.—The annual competition instituted by Mr. William Colchester, of the Chemical Manure Works, Griffin Mills, was decided on Friday last week at Ipswich, by the two experts who kindly gave their services as judges—Mr. Thos. Franklin (a judge in the recent malting and seed barley competitions at the Brewers' Exhibition), and Mr. W. J. Seals, of Gippeswyk Park, Ipswich, a member of the Adjudication Committee of the Brewers' Exhibition. The competition was open only to users of the "Gold Cup Fertiliser," Griffin Brand, prepared and manufactured at the above works. After a very keenly-contested and well-sustained competition, the winning sample proved to be No. 54, entered by Mr. William Nisbet, Park Gate Farm, Stratford St. Andrew, Saxmundham, and grown on medium soil, with a sandy subsoil, the preceding crop in 1897 being beans and peas, and the manure used at the date of sowing, February 28th, 4 cwt. per acre of the Gold Cup Barley Fertiliser. The judges subsequently visited the Chemical Works, and Mr. Howison, the chemist in charge, gave some very interesting particulars of his researches into the subjects of both cereals, and also the potato tubers.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of High-grade Nitric and Acetic Acids. C. Uebel and Chem. Fab. Rhenania. 22,858. October 31.

Electrolytic Apparatus. J. Loiselet. 22,879. October 31.

Fish-offal Digesters. T. H. Wymonde. 22,916. November 1.

Non-hygroscopic Calcium Carbide Tablets. M. A. Williams. 22,951. November 1.

Improved Manufacture of Matches. S. L. Fog and A. G. Kirschener. 22,955. November 1.

Improvements in Aluminium. J. G. Slater. 23,002. November 1.

Extracting Metals and Forming Alloys. J. B. de Aizugarny. 23,022. November 2.

Filtering Sewage. F. Bettany. 23,024. November 2.

Cleaning Paint, etc. C. H. Hargreaves. 23,041. November 2.

Manufacture of Pigments. A. Stoop. 23,071. November 2.

Using Blast Furnace and Coke Oven Gases. E. D. y. Crooke. 23,079. November 2.

Manufacture of Arsenic-free Vitriol. D. Williams. 23,081. November 3.

Improved Liquid Detergent. J. Mayer, junr., and L. Korn. 23,246. Nov. 4.

Refrigerating Apparatus. D. Stewart and T. Wishart. 23,266. November 5.

Ejectors for Raising Sewage. I. Schone and E. Ault. 23,305. November 5.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in and Relating to the Treatment of Solutions of Carbonates of Soda, resulting from the Electrolysis of Chloride of Sodium, and in Apparatus applicable for use therein. J. Hargreaves, Widnes, Lancs. Eng. Pat. 21,178. September 15, 1897.

The chief object of this patent is to enable porous diaphragms to be used in the electrolysis of salt solutions. This end is achieved by employing an improved method of treating the electrolyte, so as to recover the sodium carbonate, from the undecomposed salt. During the process of electrolysis solutions of sodium carbonate charged with more or less undecomposed salt are obtained, which solutions will henceforward be referred to respectively as "impure" and "pure." These solutions are evaporated in pans, which, for example, may be spoken of as in a series of three. Now, the patentee has found that when a salt solution containing a relatively small amount of sodium carbonate is evaporated, the relative amount of carbonate increases, resulting in a mother-liquor containing salt and sodium carbonate in the constant proportion of about two equivalents of salt to one of carbonate. Moreover, when salt crystals or mixed crystals of salt and monohydrated sodium carbonate are boiled in a sufficiently large excess of a concentrated solution of sodium carbonate, the salt goes into solution and is replaced, from the boiling soda solution, by monohydrated sodium carbonate.

As the outcome of these facts the "pure" solutions are evaporated in the first pan of a series, and the "impure" in the second. The composition of the "impure" solution changes, the mixed crystals of salt and sodium carbonate are fished, and are turned into the boiling (nearly pure) solution of sodium carbonate in the first pan. Solid sodium carbonate and a solution rich in salt result. The mother-liquors, which, after cooling and crystallization contain much salt and a little carbonate, may be treated with carbon dioxide; but preferably the small amount of sodium carbonate is used to precipitate the alkaline earths in fresh brine, which is thus purified, as well as fortified by the salt in the mother-liquor.

Several modifications of procedure are described, including the carbon-dioxide treatment of the mother-liquors. The plant used is illustrated by ten figures.

System and Apparatus for Treating Garbage. G. E. Gale, 52, Halstead-street, East Orange, N.J., U S.A. Eng. Pat. 26,069. November 9, 1897.

The material is cooked in two rendering tanks, to which is common a press and a drier, all of which are air-tight, and so connected by air-tight pipes and valves that the whole process of rendering, pressing, and drying is conducted without the discharge of any noxious gases or the exposure of the garbage to the air. One press and drier can serve two rendering tanks on account of the cooking operation taking twice as long as those of pressing and drying. In the rendering and cooking stage, the grease and fertilising ingredients are recovered. The essential feature of novelty lies in the whole apparatus being air-tight or being worked under a slight vacuum. There are seventeen figures.

An Improved Method of and Apparatus for Treating Paraffin Scale. J. Armour and F. Alison, both of Clippens Oil Co., Ltd., Pentland Works, Loanhead, N.B. Eng. Pat. 20,086. September 22, 1898.

This is an improvement on Tervet and Alison's patent, No. 8,756/86, and does away with the expensive method of turning the paraffin cakes by manual labour during the process of "sweating." The wax is run into cells temporarily retained in a vertical position until it is solid. The temperature of the sweating house is then raised, and as the cells are pivoted at the base on a rocking platform, they can be turned first from one side to the other like the leaves of a book. When the "sweating" is completed the cells are brought to the vertical again, the wax melted, and finally run off. There are six figures.

Electrolytic Process for the Extraction of Metals from their Halogen Combinations. Dr. E. Hilberg, Shellingstrasse 16, Berlin. Eng. Pat. 16,659. July 30, 1898.

The molten chloride, covered with a porous non-conductor, is decomposed by the electric current under a slight vacuum. Thus in the preparation of magnesium from carnallite, the mineral is melted, covered with asbestos, and the current passed. As soon as a smell of chlorine indicates that the decomposition has begun, a vacuum is created in the decomposing vessel, thus avoiding the formation of magnesium oxide.

Improvements in the Manufacture and Composition of Soap for Toilet and Laundry Purposes. E. G. Hughes, Victoria and Cateaton-streets, Manchester, Eng. Pat. 4,153. February 19, 1898.

In preparing a soap for very hard waters an oxalate of soda, potash, or ammonia is incorporated with the soap in the proportion of five parts of oxalate to ninety-five of soap.

THE DANGERS OF A NEW INDUSTRY.

THE dangers appertaining to any new chemical industry were forcibly illustrated during an inquest held on Tuesday last, at Runcorn, on the body of John Lawrenson, who died from injuries received by an explosion at the Wigg works of the United Alkali Co.

In the Wigg works, cyanide of potassium is manufactured (most of which goes to the various gold-producing centres for the newer processes of gold recovery).

It was stated at the inquest, that the pipes contained a deposit of some carbon compound (probably of the nature of a fulminate) caused by the decomposition of the hydrocyanic acid. The workman, Lawrenson, in turning a large iron valve, probably caused the detonation of this powder, which exploded with such force as to blow him a distance of twenty yards. It is quite certain that this process should now be classed under the head of "Dangerous occupations," and special rules applied to the working processes.

At the inquest the jury returned a verdict of accidental death. [The process of manufacture was described in the *Journal* No. 474 p. 399.]

PROPOSED DR. HOPKINSON MEMORIAL LABORATORY.—Alderman John Hopkinson, the members of his family, and near relatives have offered to the Owens College, in memory of the late Dr. John Hopkinson, a gift of £1,600. to cover the expense of building the dynamo-house connected with the new physical laboratory. It is hoped that by additional contributions from friends who desire to see a suitable memorial to Dr. John Hopkinson in Owens College (where he was a student for three years) it may be possible to complete and equip the annexe containing in addition to the dynamo house a number of rooms devoted to electrotechnics, and that the whole may be known as the "Dr. John Hopkinson Electrotechnical Laboratory."

FRANKLIN INSTITUTE LECTURES.—Announcement is made by Dr. Wm. Wahl, secretary of the Franklin Institute, Philadelphia, of the following lectures before the Mining and Metallurgical Section, between October 12, 1898, and May 24, 1899:—October 12th, "Anthracite Coal in Peru," by Mr. William Griffith, Scranton, Pa.; December 28th, "Feldspars and Kaolins of South-eastern Pennsylvania," by Prof. T. C. Hopkins, State College, Pa.; January 11th, "Segregation Tests on Steel Ingots," by Mr. A. W. Allen, Pencoyd Iron Works; on the same date, "The Mogallon (N. M.) Mining District," by Dr. H. M. Chance; February 8th, Notes on the "Reduction of Iron Ores," by Mr. John M. Hartman, Philadelphia; May 24th, "The Lead and Zinc Ores of South-western Missouri," by Mr. F. L. Garrison, professor of metallurgy, Franklin Institute. The following lectures have been arranged for, and the dates will be announced hereafter:—"Methods for the Examination of Explosives," by Dr. W. J. Williams, chemist to the U.S. Arsenal, Frankford, Pa.; "The Mond Process for the Extraction of Nickel," by Mr. Frank L. Slocum, Pittsburg, Pa; and "Recent Developments in the Manufacture and Applications of Carborundum," by Mr. E. G. Acheson, president Carborundum Co., Niagara Falls, N.Y.

THE ANDREOLI OZONISER.

SINCE this ozoniser was first described in these columns, in October, 1893, many improvements have been effected in its construction and powers of production, while the uses of ozone have in turn extended in a manner which has led to the Andreoli patents being formed for commercial purposes into the Electric Ozone Synd., Ltd., of 5, New Union-street, Moorgate-street Station, E.C.

The apparatus which we shall describe and illustrate is made by this Syndicate under the Andreoli patents, the generators being constructed

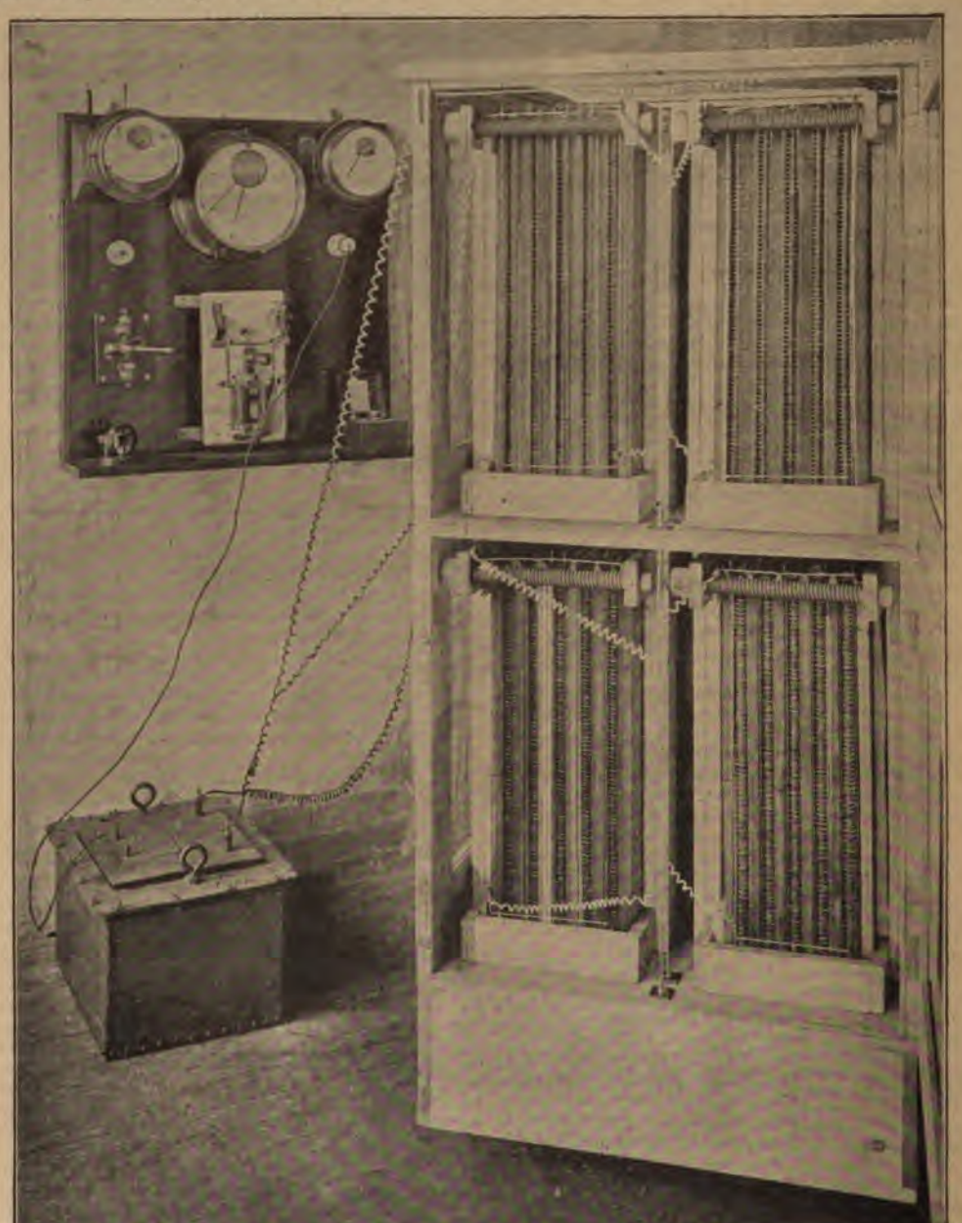

FIG. 2.

of any capacity. They consist of grids (Fig. 1) formed of aluminium serrated wires and of flat aluminium plates. These are kept separated by sheets of glass, and the whole of the plates and grids are held together by means of wooden clamps. There are 80 rows of serrated wires, each having 222 points, making a total of 17,760 points on both sides. This shows how, with a moderately high frequency and a low tension, it is possible to obtain a feebly luminous glow and discharge sufficient to bring about the formation of ozone without the production of nitrous compounds, so to speak, or rise of temperature, which would affect the yield of ozone.

Their construction is extremely simple. No skilled labour required either to make an installation or to superintend it.

An element or *unit* of ozoniser consists of 5 grids, 6 glass separato and 6 glass plates mounted in a frame.

It represents a surface of 80 square feet. The average power current per square foot is 0·75 watt. The most advantageous co dition for obtaining a good yield of ozone, and at the same time safely working the ozone generators during a long run, are fulfill when the current absorbed for the electrification does not exceed 0·

watt. per square foot of electrode. At this rate 60 watts. are requ per set of 80 square feet electrodes.

Fig. 2 shows 8 units in a box (of which only 4 can be seen in front), and a Crompton Transformer. A surface of 640 square fe thus obtained. These 8 units can give 60 grammes of ozone, wh equals 120 grammes per kilowatt. They are worked with 85 v 6 amperes in the primary circuit; 2,800 volts, 0·13 ampere in secondary circuit. The units are grouped in parallel.

The average output of the ozonisers of the Electric Ozone Syndic was last year a little more than 30 grammes of ozone per horse power

hour. The new apparatuses which are described can give 125 grammes of ozone per kilowatt hour. The cost of ozone at 2d. per 1,000 watts hour would be—500 grammes for 8d.; 1 kilo for 1s. 4d.; 10 kilos for 13s. 4d.

To obtain a good yield of ozone the current in the primary circuit, and the tension in the secondary, must be as low as possible, and the *active area* of the ozone generator *must be very large*. The greater the speed of the air passing between the points of the grids and the flat plates, the better the yield of ozone. For commercial purposes it is much more advantageous to have a large mass of diluted ozone than the same quantity of ozone in a small volume of air. The feebler the glow the less the temperature rises, and if there be a slight generation of heat the strong draught of the air which passes compensates it. The air must be evenly distributed through all the elements of an ozone installation so as to be evenly submitted to the ozonising discharge.

It will thus be seen that the new ozonisers constructed by the Electric Ozone Syndicate, Ltd., have placed ozone within the reach of everybody. Ozone is destined to be utilised in many industries where powerful oxidisers are required, and the problem solved by the Electric Ozone Syndicate is that their commercial apparatus generate ozone in large quantity in a continuous manner, and at a low cost.

FRAUDULENT "WHEAT DRESSING."

IN consequence of the prevalence, in some districts, of smut in wheat during the past few years, more attention has been directed of late to the dressing or steeping of wheat seed before sowing. There is reason to believe that, in addition to several recognised materials employed effectually for this purpose, the commonest being perhaps sulphate of copper (known also as "bluestone" and "blue vitriol"), there are other materials of little, or at least doubtful, value, which the farmer, if not careful, may find thrust upon him. One such case was brought last week under the notice of the Royal Agricultural Society. A very large farmer and extensive wheat-grower sent for analysis two samples of materials sold to him as "wheat dressing," which he had been using. Both of these were bright in colour. The one was found to be genuine blue vitriol (sulphate of copper), but the other showed, on analysis, the following composition :—

Sulphate of iron	98·75
Prussian Blue..	1·06
Sand	·19
	100·00

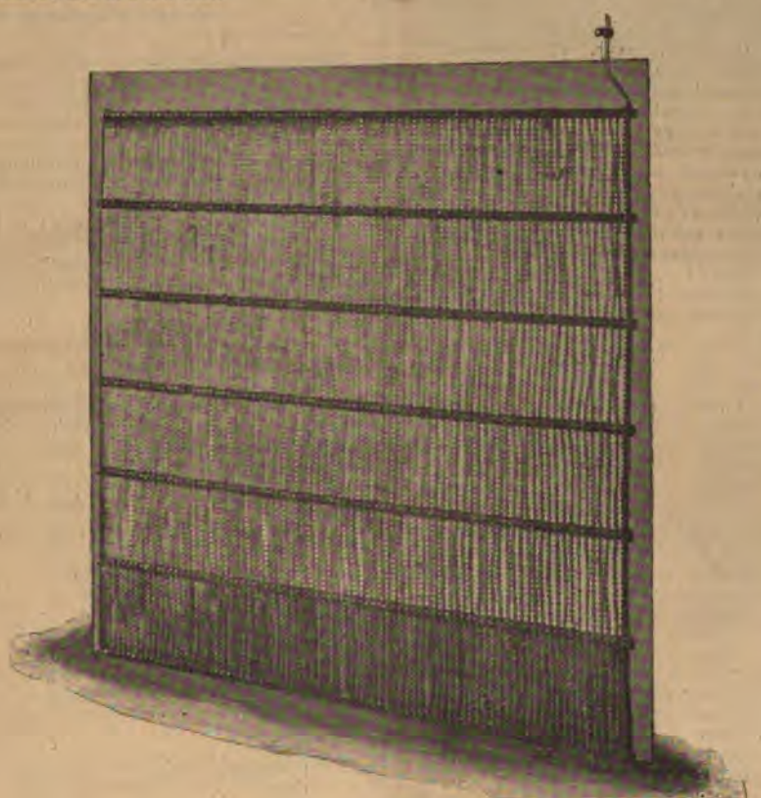

FIG. 1.

AMERICAN PATENT LAW REFORM.

THE Commission appointed by President McKinley to revise the patent and trade mark laws of the United States and to bring them into conformity with the international agreements made in Paris in 1883, in Madrid in 1891, and in Brussels a year ago, recently met in Chicago. Judge Peter S. Grosscup, of that city, A. R. Greeley, assistant-commissioner of patents, and Francis Forbes, a New York patent lawyer, constitute the Commission. The sessions were held in the United States District Courtroom.

The Commission will sit in Chicago all this month to hear complaints and to receive suggestions, and will take into consideration the various matters affecting the reform of the patent laws. The law provides that the report of the Commission shall be made to the next Congress; that it shall not only indicate proposed changes in the present law, but state the reasons leading the Commissioners to recommend the modifications. The proceedings are naturally being watched with considerable interest in the United States, and we should think the report will be of much aid to us on this side. The American Patent System has been greatly praised and greatly condemned over here. This report should lay bare the defects, and make clear the advantages. It will then be an easy matter to judge which of the two preponderates.

This was merely sulphate of iron coloured blue with Prussian blue, so as to make it look like sulphate of copper, the purchaser no doubt thinking that he was getting the latter, the appearance of which was familiar to him. On making further inquiry Dr. Voelcker, consulting chemist to the Society, found that this mixture was sold under the following description :—"Finely-ground vitriol, specially prepared as a dressing for wheat." The price paid was 28s. per cwt., that of sulphate of iron being about 4s. per cwt., while sulphate of copper would cost about 20s. per cwt. Unfortunately, inasmuch as the general term "vitriol" is applicable alike to sulphate of copper and sulphate of iron (the former being "blue vitriol" and the latter "green vitriol"), it is doubtful what remedy a purchaser would have, but that the second preparation was a "colourable imitation" of sulphate of copper is clear, and so it is well to put farmers on their guard against such.

THE OWENS COLLEGE.—At a Council meeting held on Wednesday last the following scholarships, etc., were awarded :—*Research Fellows:* J. F. Bottomley, Ph.D., in chemistry; H. C Carpenter, B.A., Ph.D., in chemistry. *Research Students:* C. H. G. Spronkling, B.Sc., in chemistry; F. Howles, B.Sc. (for one term), in chemistry.

OUTPUT OF BRITISH MINERALS.

OWING to a new method of compiling the annual statistics, the returns of the mineral production of the U.K. for 1897 were published only last week. We give the figures for 1896 by way of comparison :—

The total value at the mines and works of the forty-three different minerals which the country has produced, was £72,043,801. as against £69,088,366. in 1896. The output of *coal* was 202,129,931 tons, the highest hitherto recorded; the year 1897 is memorable from the fact that for the first time the output of coal in the Kingdom has gone beyond two hundred million tons; it exceeded that of the previous year by 6,768,671 tons. The quantity exported was no less than 37 million tons, and is likewise the highest amount on record; the exports approach our entire output 50 years ago, and considerably exceed the output of any other country in the world except Germany and the United States. *Bauxite* shows a marked increase, while *alum clay* has dwindled to very insignificant proportions. *Gold ore* has increased in 1897, but shows a great falling off compared with 1894 and 1895. *Lead ore* and *iron pyrites*, after a heavy drop in the years just mentioned, seemed to have reached a settled production for the time being. *Mica* appears as a new comer with a total of 4,983 tons in 1897. *Manganese ore* continues on the downward grade, the decrease in 1897 being nearly fifty per cent. compared with 1896. *Soapstone*, after a blank for two years, was responsible for 28 tons in 1897. *Oil shale* is lower. *Petroleum* stands unchanged. *Phosphate of lime* shows up a little better than in 1894 and 1895, but the total is only estimated, and even then pales before the the figures in the special table of imports, which follows. The Falls of Foyers is still the only place where *aluminium* is produced. No *plumbago*, *antimony ore*, *potassium*, or *quicksilver* was produced last year. The imports of the latter article were 4,105,053 lbs. against 3,536,928 lbs. in 1896. *Sodium* is now only produced at Oldbury, the amount for 1897 being about 85 tons, valued at £12,750. *Strontium sulphate* has declined somewhat, but still the total far exceeds that of the six preceding years. The following are the returns :—

TABLE I.

GENERAL SUMMARY OF THE MINERAL PRODUCE OF THE UNITED KINGDOM AND OF THE ISLE OF MAN.

Description of Mineral.	1896. Quantity (Tons).	1897. Quantity (Tons).	Value (£).
Alum Clay (Bauxite)	7,249	13,327	2,823
Alum Shale	Nil	611	76
Arsenic	3,616	4,165	74,795
Arsenical Pyrite	8,808	13,137	10,734
Barytes	23,737	22,723	24,117
Basalt, Diorite, etc.	2,286,999	2,355,554	441,391
Bog Ore	6,652	7,124	1,781
Calc Spar	—	4,066	—
Chalk	3,559,229	3,858,448	163,595
Chert and Flint	107,967	93,710	16,495
Clays	11,341,782	12,705,196	1,453,128
Coal	195,361,260	202,129,931	59,740,009
Copper Ore	8,970	7,132	18,706
Copper Precipitate	198	220	2 320
Fluor Spar	394	297	397
Gold Ore	2,765	4,517	6,282
Granite	1,756,816	1,847,323	552,604
Gravel and Sand	1,268,310	1,356,787	111,332
Gypsum	193,311	181,385	66,978
Iron Ore	13,700,764	13,787,878	3,217,795
Iron Pyrites	10,017	10,583	4,525
Jet (Lbs.)	294	84	8
Lead Ore	41,069	35,338	275,409
Limestone (other than Chalk)	11,011,350	11,003,524	1,155,993
Manganese Ore	1,080	599	351
Mica	Nil	4,983	1,727
Nickel Ore (Cobalt)	—	300	300
Ochre, Umber, etc.	9,891	14,422	12,997
Oil Shale	2,419,525	2,223,745	555,936
Petroleum	12	12	29
Phosphate of Lime	3,000	2,000	3,500
Plumbago	Nil	Nil	—
Quartz	519	452	339
Salt	2,022,357	1,903,493	620,898
Sandstone	4,507,745	4,964,109	1,524,700
Slag	562,293	—	—
Slate and Slabs	586,933	609,194	1,649,576
Soapstone	Nil	28	98
Strontium Sulphate	18,042	14,987	4,310
Tin Ore	7,663	7,120	254,218
Uranium Ore	35	30	1,367
Wolfram	43	125	2,008
Zinc Ore	19,319	19,278	69,154
Total Value	—	—	72,043,801

Out of 40 items (petroleum, mica, and plumbago being omitted for obvious reasons), 20 show an increase; salt, copper ore, and limestone are among the decreases. *Slag*, which appeared for the first time in 1895, is a blank this year. *Clays* include potters' clay, china clay, and fuller's earth.

In addition to the general summary, the returns include details of the production of the items in Table I. from which we make the following selection :—The highest monthly price for best selected British copper in 1897 was £55., and the lowest £50. The average price for the year was £52. 5s. 8d.; the corresponding figure for Chili bars was £49. 3s. 6d. The amount of *burnt cupreous pyrites* treated at the 15 extraction works in operation was 341,403 tons in 1897, and 345,446 tons in 1896, from which 12,289 and 12,435 tons of copper were extracted in the respective years; 1,569 and 1,588 ozs. of gold; and 273 122 and 276,356 ozs. of silver. As usual, these figures are from the returns of Mr. Bird, of Liverpool.

The following table shows the production of *bauxite* (alum clay) from which 850 tons of alumina were extracted at Larne last year; this in turn yielded 310 tons of metallic aluminium.

TABLE II.

OUTPUT AND VALUE OF ALUM CLAY.

Name and Situation of Mine.	Owner.	Quantity.	Value of the Mine
IRELAND.			
ULSTER (Co. Antrim).		Tons.	£
Cargan & Evishacrow.	British Aluminium Co., Ld.	13,327	2,823
Correen, Broughshane.	Holloway and Evans		
Irish Hill and Straid, Ballynure	Bauxite Co., Ltd.		
Parkmore, Barard, and Essathackan	Antrim Iron Ore Co., Ld.		
Tuftarney	Crommelin Mining Co., Ld		
Total for 1897		13,327	2,823
Total for previous year		7,249	1,918

Table III. shows the imports of manganese ore from foreign countries and the chief ports in the United Kingdom through which the ore comes. Greece, British East Indies, Japan, Peru and Brazil, figure now as sources of production.

TABLE III.

MANGANESE ORE IMPORTED INTO THE UNITED KINGDOM.

Ports into which Imported.	1896. Quantity. Tons.	1897. Quantity. Tons.
London	3,885	2,055
Liverpool	43,283	27,761
Bristol	45	—
Cardiff	8,344	2,132
Chester	2,100	3,664
Fleetwood	36,530	38,260
Gloucester	10	21
Goole	—	1
Hartlepool	126	—
Hull	7	870
Manchester	65	1,428
Middlesbro'	29,073	49,664
Newcastle	20	298
Newport	29,867	29,623
Shields, South	8	—
Southampton	1	30
Swansea	6,050	—
Leith	35	23
Dundee	209	—
Glasgow	306	494
Grangemouth	7	—
Belfast	11	—
Total	159,982	156,324

Countries whence Imported.	Tons.	Tons
From Russia	55,697	65,092
Sweden	8	—
Belgium	21	214
France	2,303	3,241
Portugal	1,830	795
Spain	11,327	10,122
Italy	—	2,100
Greece	9,785	11,860

untries whence Imported.	Tons.	Tons.
Turkey	24,458 ..	10,167
British East Indies ..	13,686 ..	23,623
Japan	4,383 ..	2,897
Australasia	66 ..	—
Peru	— ..	6,797
Chili	24,196 ..	8,510
Brazil	11,700 ..	8,210
Other countries	522 ..	2,696
Total	159,982 ..	156,324

llowing record of imports of iron pyrites and the countries nported is useful :—

TABLE IV.

ORTS OF IRON PYRITES INTO THE UNITED KINGDOM.

	Norway.	France	Portugal.	Spain.	Other Parts.	Total Quan'ties	Total Value.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	£
	25,882	42,433	21,056	526311	7,409	623,091	1 021,096
Year	12,929	8,949	7,391	552396	7,391	589 056	999,793

tails of the production of oil-bearing shale were as follows :—

TABLE V.

PRODUCTION OF OIL SHALE.

County.	Quantity.	Average Price per Ton at the Mine.	Value at the Mines.
ENGLAND.	Tons.	s. d.	£
North	989	5 0 ...	2,642
st and West Ridings ...	9,579		
Total	10,568	—	2,642
WALES.			
... ...	1,560	5 0 ...	390
SCOTLAND.			
... ...	1,432		
h	718,270		
East) ...	99,014		
West) ...	3,022		
w	1,378,413	5 0 ...	552,904
... ...	4,208		
East) ...	6,500		
West) ..	678		
d	80		
Total ..	2,211,617	—	552,904
Total for 1897	2,223,745	—	555,936
Total for previous year	2,419,525	—	604,881

ports of phosphate of lime, previously referred to, are given Holland and French Guiana now appear as sources of pro-

TABLE VI.

IMPORTS OF PHOSPHATE OF LIME.

ountries whence imported.	1896. Quantity. Tons.	1897. Quantity. Tons.
nd	7,182 ..	4,796
um	68,834 ..	64,657
ce	23,186 ..	35,107
ia	55,723 ..	73,230
d States of America ..	126,884 ..	134,168
h West India Islands ..	6,581 ..	5,523
h Guiana	2,025 ..	3,820
h North America	617 ..	470
h West India Islands ..	— ..	808
Countries	282 ..	2,209
Total	291,314 ..	324,788

res for *salt* are always of interest. Table VII. gives a summary ut of (1) rock salt and (2) white salt made from brine and salt in brine, used for making alkali. Out of the grand totals for 1896, 1,721,415 tons and 1,808,038 tons came under the ding.

TABLE VII.

SUMMARY OF THE OUTPUT OF SALT.

County.	Total Quantity of Salt. (1.) and (2.) Tons.	Comparison with previous Year. Tons.	Total Value. £
ENGLAND :			
Chester and Stafford ..	1,232,464 ..	— 74,714	432,154
Lancaster	183,495 ..	— 3,589	
Durham	224,542 ..	— 29,088 ..	87,010
Worcester	176,280 ..	— 11,584 ..	70,511
York	44,923 ..	+ 1,241 ..	20,173
Total for England ..	1,861,704 ..	— 117,734 ..	609,848
IRELAND :			
Antrim	41,789 ..	— 1,130 ..	11,050
Total for 1897 ..	1,903,493 ..	— 118,864 ..	620,898
Total for previous Year	2,022,357 ..	— 150,896 ..	666,613

In the last table we have a list of the countries to which salt has been exported :—

TABLE VIII.

SALT (ROCK AND WHITE) EXPORTED FROM THE UNITED KINGDOM.

Countries to which Exported.	1896. Quantity. Tons.	1897. Quantity. Tons.	1897. Value. £
Russia	16,008 ..	8,161 ..	3,951
Sweden and Norway	29,418 ..	21,402 ..	12,540
Denmark	41,352 ..	36,227 ..	15,481
Germany	21,009 ..	20,568 ..	11,085
Holland	15,323 ..	12,960 ..	3,998
Belgium	33,246 ..	33,511 ..	17,456
West Coast of Africa	36,459 ..	37,414 ..	43,333
British Possessions in South Africa	5,431 ..	6,314 ..	6,204
British East Indies	203,619 ..	264,216 ..	149,990
Australasia	45,856 ..	33,981 ..	35,230
British North America	68,615 ..	73,989 ..	45,690
United States of America ..	112,679 ..	92,678 ..	94,405
British West Indies	7,816 ..	6,716 ..	6,819
Foreign West Indies	43 ..	21 ..	84
Chili	6,913 ..	7,855 ..	5,640
Brazil	10,811 ..	7,425 ..	6,197
Other Countries	6,337 ..	5,247 ..	8,430
Total	660,935 ..	668,685 ..	466,533

The summary of the mineral output of the British Colonies and Possessions (with which, in a digest form, we have previously concluded these returns), is no longer published with the U.K. returns, and consequently it has had to be omitted this year.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for September, 1898, as compared with September, 1897 :—

ALKALI.

Port.	1897. Cwts.	1898. Cwts.	1897. £	1898. £
Russia	19,950	22,127	5,744	5,947
Sweden and Norway	12,418	7,258	3,219	1,464
Germany	16,633	16,814	3,931	3,813
Holland	13,729	8,398	2,563	1,741
France	3,947	7,782	1,190	2,705
Spain and Canaries	30,328	32,878	9,914	10,506
Italy	18,404	28,526	5,286	8,284
United States	101,472	50,047	19,812	11,564
Australasia	22,311	14,436	7,203	4,596
British North America ..	24,963	16,813	5,808	4,210
Other countries	124,440	104,654	34,413	31,157
Total	388,595	309,733	99,083	85,987

BLEACHING POWDER, ETC.

Port.	1897. Cwts.	1898. Cwts.	1897. £	1898. £
United States	66,348	52,149	20,532	13,558
Other countries	44,068	29,943	13,951	8,860
Total	110,416	82,092	34,483	22,418

Trade Notes.

The Position of Nitrate.—Notwithstanding the short-lived strike which impeded shipping operations and temporarily curtailed the Nitrate Railways traffic receipts, the October shipments to Europe were on a formidable scale, reaching 175,000 tons, against 120,000 last year. Deducting 40,000 tons of so-called "deliveries," the visible supply at November 1 comes to 435,000 tons, against 500,000 a year ago, and the difference of 65,000 tons will practically be wiped out by the end of the month, as the quantity now loading (133,000 tons) will, in all probability, increase to 180,000 tons, against 115,000 in 1897. Numerous steamers have been chartered to eke out the sail tonnage, which although relatively large, is insufficient to cope with the enormous quantity of nitrate ready for shipment; and even assuming the December shipments not to exceed 160,000 tons, it is evident that the total available for next season will be considerably larger than this year. Under the circumstances the wonder is, not that the nitrate market is stagnant, but rather that prices have not suffered a sensible decline. High freights and the fear of political disturbances have so far buoyed up the position, but the removal of those factors must almost inevitably bring nitrate of soda down to last Spring's lowest level.

Oil Gas Enrichment Co., Ltd.—The fifth annual general meeting of shareholders of this company was held in Dowell's Rooms, Edinburgh, recently. Mr. James Milne, chairman of the directors, presided. The annual report and balance sheet were approved of, and a dividend of 5 per cent. per annum, free from income tax, payable on and after 1st November, was declared on the Preference or A shares. Mr. Milne and Mr. Hugh Brown, Glasgow, were re-elected directors.

The Treasurership of the Royal Society.—There is some agitation over the proposal of the Royal Society to make a very junior fellow treasurer, on the retirement of Sir John Evans. The treasurership has always been regarded as a most important office, and its holder ranks next to the president on the Council. The last four treasurers have all been men of distinguished scientific attainments and high position, and no apparent reason exists or is given for a sudden change of policy in this respect. The retiring treasurer, Sir John Evans, is as well known in the City, as chairman of more than one important company, as he is among antiquaries; so that the society can hardly have reason to complain that eminent men of science are deficient in the business capacity necessary for the proper management of their funds.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are dull at 8½d. for 90's and 50/90's. In naphthas, solvent is moving fairly well, but crude is variable and inclined to easiness. Carbolic acids are steady, but crystals are perceptibly weaker. Pitch is firm at 25s. f.o.b. East Coast. West Coast unchanged.

Sulphate of ammonia is firm, and prices are well maintained, though the market has settled to its usual mid-monthly quietude. Beckton is offering for prompt and January/June at £10. Closing prompt values at other ports are:—London outside makes, £10. 2s. 6d.; Liverpool, £10. 2s. 6d.; Hull, £10. 1s. 3d.; and Leith, £10. 1s. 3d. to £10. 2s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is more brisk, especially for forward supplies, though prices still rule in buyers' favour. For prompt delivery, quotations for caustic soda are as follows:—F.o.b. Liverpool, 77%, £7. 15s.; 74%, £7. 10s.; 70%, £7.; 60%, £6. nett per ton. Ammonia alkali, 58%, £4. 2s. 6d., bags, f.o.r. Soda crystals and bicarbonate without change. Bleaching powder continues to droop in value, and forward business has been done at £4. 2s. 6d. to £4. 5s., f.o.r. Chlorates of potash and soda steady at 3¾d. per lb., f.o.r. spot delivery forward. Potash is quoted at 3¾d. per lb. Prussiate of potash firm at 6¾d. per lb. Brown acetate of lime £3. 7s. 6d. nett, ex-ship. Grey, £7. 15s. per ton. Other acetates unaltered. Sulphate of copper continues firm at £18. 5s. to £18. 10s., f.o.b. Arsenic quiet and steady at £16. 10s., Glasgow. Borax maintained at £24. 10s. per ton. Reports generally indicate more business doing in all branches.

REPORT ON MANURE MATERIAL.

The market remains very firm for all classes of material, but beyond this there is nothing very special to say. Extreme prices are being paid for high grade Florida rock for immediate shipment, both for United Kingdom and the Continent, the quantity available being in very narrow compass. The position of Algerian rock is unchanged. There are, however, sellers of South Carolina River rock at 6d. per unit, in cargoes, c.i.f. to United Kingdom, and it is probable that something less would be accepted if bid. East Indian bone meal is firmer, and £5. per ton, ex quay Liverpool, would have to be paid for Nov.-Dec. shipment. There is nothing fresh to report in crushed East Indian bones, and in the absence of cargoes of River Plate bones offering, quotations for these are only nominal. Nitrate of soda is steady at 7s. 7½d. per cwt. for good, up to 7s. 9d. per cwt. for fine quality. A parcel of River Plate dried blood has been sold at 9s. 4½d. per unit, ex quay Liverpool.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 49s. 5d.; Middlesbrough, 50s. 9d. cash; and hematite, 57s. 3½d. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed at £56. 3s. 9d. to £56. 8s. 9d. cash, and £56. 5s. to £56. 10s. three months. Tin uncertain: Straits closed at £81. 15s. to £82. 5s. cash, and £82. 5s. to £82. 15s. three months; Australian, £82. 5s.; English ingots, £84. 10s. to £84. 15s. Lead firm: Spanish, £13. 11s. 3d.; English, £13. 13s. 9d.; Silesian spelter, ordinary, £24. 10s. to £24. 12s. 6d. Nickel, 1s. 2½d. Antimony, £36. 15s. to £37. 5s. Quicksilver: First hands, £7. 10s.; second hands, £7. 9s. *Copper shares* steady: Cape, 5⅜ to 5⅝; Copiapo, 2⅛ to 2⅛; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅛ to 3¼; Rio Tinto, 30⅝ to 30¾; Tharsis, 7⅛ to 7⅜.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is quiet and business has been very restricted. Olive is only in moderate inquiry, but prices are steady so far. Linseed is very quiet at 18s. to 19s. cwt. for Liverpool makes in export casks, but sellers are firm at these prices so far. Cottonseed is still held for 15s. to 15s. 6d., but is rather slow of sale thereat. There is more doing in castor oil. Calcutta has been moving freely at 3⅝d. ex quay and 3¾d. store; first pressure French, 3⅝d., and Madras, 2¾d. per lb. Tallow is firm in price, but slow, with a flagging demand. Resin is firm for all grades, especially fines, which are on the advance. Spirits of turpentine firm at 28s. cwt. for spot. Petroleum: Russian, 6d., and American 5⅝d. to 8d. per gallon.

CAKES.—The market for linseed has become quieter in tone, and the quotation for American Western on the spot is reduced 2s. 6d., with only a very moderate inquiry experienced at £7. 5s. to £7 7s 6d. River Plate are also the turn in buyers' favour, whilst previous prices are still quoted for both Bombay and Russian. Liverpool makes are the turn dearer, and some holders continue to experience a heavy demand at £8. 2s. 6d. to £8. 15s. per ton, according to brand. Good to choice American decorticated cottonseed continue in good request, and previous quotations are steadily maintained, with a moderately fair trade doing in Liverpool makes at £6 7s. 6d. to £6 15s. per ton. Undecorticated Liverpool makes are unchanged in value, with a good inquiry. Egyptian on the spot is quieter in tone, with only a moderate inquiry at £4. 6s. 3d. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The market for all oils still remains a very dull one, and values have fallen back, especially in linseed oils, which register fully 10s. below prices recorded a week ago. Cottonseed oil too has lost about 5s. per ton. The imports for the year into Hull as against the same period a year ago have been, linseed, 358,437 qrs. against 592,717 qrs.; rapeseed, 88,380 qrs. against 73,578 qrs.; cottonseed, 155,500 tons against 164,290 tons; oilcake, 11,340 tons against 8,718 tons; olive oil, 5,676 tons against 4,201 tons. A special feature here just now appears to be the extracting by the solvent processes of oils from seeds, for which there are now three companies in existence, each of which process is the subject of a separate patent. Some crushers, whose opinion should be considered of value, declare that extracting by pressure or mill is doomed. Linseed oil, spot, is quoted 16s. per cwt., naked; forward Nov.-Dec., 15s. 10½d.; Jan.-April, 15s. 4½d. to 15s. 6d. Boiled and Refined £1. to £1. 10s. per ton extra. Refined cottonseed oil continues very flat, being quoted spot naked and to April 12s. 7½d., at which there are sellers. Ordinary casks £1., and barrels £1. 10s. per ton extra. Castor oil (extracted here), 30s. 6d. per cwt. in barrels, cold drawn, pharmaceutical, and 4d. per lb. to

pressure, 28s. in barrels, and 3⅝d. per lb. in cases; in barrels, 3⅛d. per lb. in cases. Resins still strongly uoted on the spot from 4s. 9d. to 9s. 6d per cwt., according Olive oil, Seville £32., Candia £31. 10s. per tun. Olive changed. Oleines from £17. 15s. per ton, c.i f. here. Cod to £18. per ton. American pail lard, 28s. 6d. to 30s. Swedish butters, 116s. to 120s.; Dutch, 103s to 110s.; 01s. to 106s.; Canadian, 95s. to 99s.

.—Business quiet without material change in prices owing weather. Linseed cakes, 95% pure, £8. 5s. to £8. 10s. inseed), £7. 5s to £7. 10s. Russians, £7. 15s. to £8. es, best makes, £4. 7s. 6d. to £4. 8s. 9d.; seconds, £4. 7s. 6d.; decorticated, £6. 7s. 6d. Rape cakes, £4. 2s 6d. per ton.

5.—The situation and market prices unchanged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

ers of the solid paraffins here have not formally announced on their prices, but a natural advance has nevertheless e to the extent of one eighth of a penny in the meantime. e is given effect to in figures below Whether the advance ble to hold its own for anything like a time remains to be phate of ammonia has been all the week in the ascendant, 10 5s. prompt Leith towards the close of business for last hich figure to-day it is understood to hold at least. In this resent there is nothing doing on the forward basis, those rd needs preferring to stand off and trust to the chance of a nary chemicals are all unchanged and not very active. f Copper is again dearer. A chemical works of some time has just been definitely closed at Irvine. This was one of ses of the United Alkali Company at the time of formation.

ices current are :—Soda crystals, £2. 7s. 6d to £2. 12s. 6d.; soda ash, £4. 2s. 6d. to £4. 15s nett, Tyne; white alkali, 5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. gow; caustic soda, white, 74° £7. 10s. od, 70/72°, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liver- hing powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s od.; lish refined, £13. 10s, and boracic acid, £25 nett, Glasgow; e of soda, 5-cwt casks, £6. 7s. 6d, and 1-cwt casks, £6. 15s. pool; bichromate of potash, 3½d., less 3½% for Scotch and liveries (for export, 3¼d. nett, f.o b. Glasgow); bichromate ¼d., less 3½% for Scotch and English deliveries (for export, f o.b. Glasgow); chlorate of potash, 3¾d, less 5% Liverpool; soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 5s. 0d. .b. Leith; salammoniac, first and second white, £35. and £33. port; sulphate of copper, £18 0s. 0d. to £18. 5s 0d less ool; paraffin scale, hard, 1½d. to 1⅝d. perlb., and soft 1⅝d. raffin wax, 120° semi-refined, 1⅞d. to 2⅛d. per lb; paraffin htha), 7d. per gallon; paraffin oil (burning), No. 1, 6½d.; , 7d., at Glasgow and other big centres, for Scotch buyers ales a shade lower); ditto (lubricating) 865° £4. 10s. to 885° £5. 10s. to £6. and 890/895° £6 5s. to £6 15s. ports of sugar at Greenock were 11,000 bags beet unrefined, 5 baskets, and 5,601 bags cane unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

ls continue dull, and the export demand now shows signs of Sulphur is still scarce at £4. 15s. per ton. Soda crystals, d. per ton, gross weight, locally. Caustic quiet at £7. to r ton for 70%; £7. 15s. to £8. per ton for 76/77%.

ng powder, sorts, £5 0s. per ton, nett; do. hards, £5. 5s. per ; caustic soda, 76/77% £8. and 70% £7. 5s. tt; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, r ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white %, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, r ton, nett; do., 1 cwt. kegs, £7. per ton, nett: silicate of Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, , 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per eight; pearl hardening, £3. per ton, nett: pure white sulphate . £3. 10s. 0d. per ton, nett; blanc fixe. £6. 10s. per ton, nett; of barium, refined crystals, £6. 15s. per ton, nett; calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. ett; aluminate of soda, £30. per ton, nett.

—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees.

5.—The coal trade is quiet, and the demand slackening off. als are dull at 8s. to 8s. 6d. per ton. Gas coals increasing in on. Manufacturing coals quiet. Prices are as follows:—Best Northumbrian steam, 9s. 3d. to 9s. 6d. per ton; second qualities, 8s. 3d. to 8s 6d. per ton; small steam, 5s. 6d. to 6s. per ton; bunker coals, 8s. to 8s. 6d. per ton; gas coals, 9s. 6d. to 10s. per ton; household coals, 10s. to 11s. per ton; coke, 17s to 21s. per ton

New Companies.

Anglo-Italian Chemical and Mineral Co., Ltd.—CAPITAL £20,000. in £1. shares. This company has been formed to manufacture, import, sell, and deal in chemical and mineral products, especially sulphuric acid, sulphate of copper, super-phosphates, and artificial manures The subscribers to the memorandum of association are:—J. L. Atterbury, West Hadden, Rugby, gentleman; H. W. Brown, 63, St. Paul's-road, Bow, E., writer; A. Johnston, 61, Hargrave Park, N., stationer; J. Spain, Holmwood, Underhill-road, Lordship Lane, S E., accountant; F. W. Bick, 5, Henson-street, Old-street, E C, cashier; G E. Stevenson, 58, Thornlaw-road, West Norwood, S E., accountant; D. White, 9, Guildford Place, W.C, gent. Registered office, 8, Bishop's Court, Chancery Lane, W.C.

Auxiliary Soap Co., Ltd.—CAPITAL £40,000. in £1. shares (20,000 6% cumulative preference). This company has been formed to manufacture, sell, and deal in soap, perfumery, and chemical, medicinal and toilet articles. The subscribers to the memorandum of association are:—J. A. Frolich, Morning Side, Winchmore Hill, N., manager; A Waters, 104, Seventh Avenue, Manor Park, E, clerk; E. C Boyce, 9, Clarendon-road, Putney, clerk; A. J. Gregory, 150, St. Paul's-road, Camden Square, clerk; R. P. Bissmire, Hubert Grove, Clapham, manager; H. G. Chester, 58, Larcom-street, Walworth, clerk; S. J. Mason, 10, Cloudsley Place, Liverpool-road, N., bookkeeper.

Harnett & Co., Ltd.—CAPITAL £15,000. in £1. shares. This company has been formed to acquire the business carried on by G H. Harnett as Harnett's Chemical Works, and to carry on the business of manufacturing and retail chemists, druggists, drysalters, oil and colourmen, etc. The subscribers to the memorandum of association are:—G. H. Harnett, "Thanet," Devonshire-road, Balham, insurance agent; Alfred J. Campion, Yorkshire Grey Yard, Eagle-street, Holborn, E C, chemist; H G. Thompson, 1, Red Lion Court, Watling-street, E.C, merchant; L. F. Elliott, 19, Leadenhall-street, E C., steamship agent; R. S. Whalley, Lloyd's, E C, underwriter; R. J. Hodgson, 3, Brick Court, Temple, barrister; R. Gould, 35, Vanbrugh Park, Blackheath, S E., solicitor.

Hill & Castle, Ltd.—CAPITAL £20,000. in £1. shares (8 00 preference) This company has been formed to acquire the business carried on by L. G. Hill and W. Castle, at Cheese Lane, St. Phillips, Bristol, as Hill & Castle, and to manufacture, sell and deal in paints, varnishes, colours, enamels, oils, compositions, white lead, &c. The subscribers to the memorandum of association are:—L. G. Hill, 6, Clare-road, Cotham, Bristol, merchant; W. Castle, 27, Clarendon-road, Redland Green, Bristol, merchant; J. M. Newton, 3, Marlbro' Buildings, Weston-Super-Mare, cashier; Mrs. A. H. G. Espie, 4. White Ladies-road, Clifton, Bristol; H. G Perry, 8, The Park, Kingswood, nr. Bristol, solicitor; H. C. L. Matthews, Henbury, nr. Bristol, gentleman; Mrs. A. M. Hill, 6, Clare-road, Cotham, Bristol.

Kent Ice and Soap Works, Ltd.—CAPITAL £15,000 in £1. shares. This company has been formed to adopt an agreement with H. R. Trehearne, and to manufacture, sell, and deal in ice, soap, candles, paper, varnish, tallow, oil, glycerine, etc. The subscribers to the memorandum of association are:—E. A. Reynolds, 20 Eaton-street, Richmond, gentleman; E. Molsen, Pyecroft, Thames Ditton, gentleman; H. R. Trehearne, Portland House, Basinghall-street, E.C., gentleman; A. H. Crocker, 54. Dalmeny-road, Tufnell Park-road, N., gentleman; F. D. Ward, 27, Clovelly Mansions, W.C., merchant; C. J. Easton, jun., 73, Basinghall-street, E.C., clerk; L. L. Higgs, 94, L adenhall-street, E C., merchant.

North British White Lead Co., Ltd.—CAPITAL £40,000 in £1. shares. This company has been formed to carry on business as manufacturers and sellers of white lead. The subscribers to the memorandum of association are:—W. Sutton, Eskbank, Newcastle-on-Tyne, merchant; W. Middlemass, 18, S. Bridge, Edinburgh, merchant; T. Thomson, Winchester House, E.C., civil engineer; J. MacArthur, 45, Renfield-street, Glasgow, technical chemist; D. Hamilton, 224, Ingram-street, Glasgow, oil refiner; T. Macneir, 207, St. Vincent-street, Glasgow, stockbroker; A. Balfour. Glasgow, manufacturer.

Sharp, Worsnop, & Co., Ltd.—CAPITAL £8,000 in £5. shares. This company has been formed to acquire the business carried on as Sharp, Worsnop & Co., at 1, Flash Pond Chemical Works, Wyke, near Bradford, and to carry on the business of manufacturing chemists, logwood grinders, and cutters, dyers, dye and colour manufacturers, drysalters, etc. The number of directors is not to be less than 3 nor more than 5; the first are W. Sharp, C. Worsnop, and W. D. Taylor. Qualification, £300.; remuneration as fixed by the company. Registered by A. H. Atkins, Ltd., 23, Bouverie-street, E.C.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 5th.

Acetic Acid—

Holland,	50 pks.	R. W. Greeff & Co.
,,	96	A. & M. Zimmermann

Acetone—

Austria,	20 dms.	D. T. Domeier & Co.

Acids—

Holland,	70 pks.	Little & Johnston

Alkali—

Germany,	110 c.	J. Barber & Co.
U. States,	475	Furness, Withy & Co.
France,	220	J. Harrison

Alum—

Holland,	180 pks.	J. White

Alumina—

Germany,	£35	R. W. Greeff & Co.

Antimony Ore—

Straits,	25 t.	R. & J. Henderson
France,	43	J. Bamber
E. Turkey,	26	G. Smith & Son
A. Turkey,	25	Hallett & Fry

Barium Chloride—

Germany,	£60	Petri Brs.

Barytes—

Belgium,	52 pks.	W. Harrison & Co.
,,	604	J. L. Lyon & Co.
Holland,	40	P. Jantzen
,,	315	W. Harrison & Co.
Germany,	29	J. L. Lyon & Co.
,,	57	W. Harrison & Co.
Holland,	99	Wilkinson, Heywood & Co.
Belgium,	83	O'Hara & Hoar

Bleaching Powder—

France,	55 cks.	J. M. Steel & Co.

Bleaching Soda—

Germany,	£47	H. Lambert

Bone Meal—

E. Indies,	100 t.	Fox, Roy & Co.
,,	250	H. Lambert
,,	100	E. Packard & Co., Ld.
,,	200	Hollinghurst & Co.
,,	350	A. Hunter & Co.

Bromine—

Germany,	50 pks.	A. & M. Zimmermann

Caoutchouc—

Germany,	64 c.	F. Huth & Co.
U. States,	5	Lewis & Peat
France,	60	S. Figgis & Co.
Sydney,	24	McIlwraith, McEacharn & Co.
Aden,	16	Wallace Brs.
Java,	34	S. Figgis & Co.
Zanzibar,	49	Hale & Son
Hong Kong,	3 9 cs.	J. Swire & Sons
Straits,	56	Elkan & Co.
,,	78	W. Pope & Co.
,,	140	B. & F. Wf. Co. Ld.
Madagascar,	21	Kleinwort, Sons & Co.
Straits,	253	E. Boustead & Co

Carbolic Acid—

Germany,	50 cks.	J. G. Back

Castor Oil—

E. Indies,	60 cs.	Perkins & Homer
France,	6 brls.	L. & I. D. Jt. Co.

Caustic Potash—

Germany,	17 dms.	J. M. Steel & Co.

Chemicals (*otherwise undescribed*)

France,	£58	Mory & Co.
Norway,	242	R. Greening
Belgium,	17	O. Scholzig
Germany,	75	L. & I. D. Jt. Co.
Belgium,	280 10 cs.	T. H. Lee
Germany,	257	T. Palmer
France,	43	H. Ewald & Co.
Belgium,	128	John Cockerill Line
,,	20	C. Atkins & Nisbet
Holland,	8	H. Lorenz
Germany,	181	,,
,,	15	Butler's Wf., Ld.
,,	450	A. & M. Zimmermann
	4	Phillipps & Graves
Belgium,	125	T. Palmer
U. States,	510	C. E. Jones
Holland,	15	J. Owen

Cream of Tartar—

Spain,	18 pks.	B. & F. Wf. Co. Ld.
France,	3	F. C. Devon & Co.
,,	5	W. C. Bacon & Co.
,,	10 cks.	B. & F. Wf. Co., Ld.
,,	5	M. Ashby, Ld.
,,	9	C. Atkins & Nisbet

Disinfectants—

Germany	£25	L. & I. D. Jt. Co.

Dyestuffs—

Cochineal

Canaries,	41 pks.	W. M. Smith & Sons

Cutch

U. States,	40 pks.	H. A. Litchfield & Co.

Divi Divi

E. Indies,	40 pks.	Walker, Munsie & Co.

Extracts

U. States,	55 pks.	W. Burton & Sons
France,	675	T. H. Lee
,,	133	Union L. Co., Ld.
Ceylon,	3	R. G. Hall & Co.
Austria,	200	Boutcher, Mortimore & Co.
France,	50	L. J. Levenstein & Sons
Belgium,	20	T. Ronaldson & Co.
Canada,	55	M. L. Wurzburg
Holland,	20	Prprs. Dowgate Dk.
Austria,	170 brls.	Hoare, Wilson & Co.
U. States,	16	J. W. & T. A. Smith

Gambier

Straits,	480 pks.	S. Barrow & Bro., Ld.
,,	504	S. Figgis & Co.

Indigo

Holland,	5 chts.	Richardson, Spence & Co
E. Indies,	16	W. J. & H. Thompson

Myrabolams

E. Indies,	2,931 pks.	Dalton & Young
,,	200	Hicks, Nash & Co.
,,	980	P. & O. S. N. Co.

Tanners' Bark

Natal,	58 t.	J. T. Rennie, Son & Co.
,,	119	A. & W. Nesbitt
Durban,	3	Bullard, King & Co

Turmeric

E. Indies,	30 pks.	Brown & Elmslie
,,	60	L. & I. D. Jt. Co.
,,	10	W. Balchin, Ld.

Valonia

Turkey,	25 t.	A. & W. Nesbitt

Farina—

France,	2 pks.	E. Flageollet & Co.
Germany,	50	J. Knill & Co.
,,	100	J. Barber & Co.
,,	200	R. Bennett & Co.
Holland,	150	,,
,,	100	R. G. Hall & Co.
Germany,	100	Seaward Brs., Ld.
Holland,	70	H. Lorenz
,,	80	J. Knill & Co.
,,	30	J. Barber & Co.

Glucose—

U. States,	200 pks.	1,200 cwts.	L. & Til. L. C. & D Co
Germany,	8	65	J. Knill & Co.
,,	25	198	M. D. Co.

Glue—

Belgium,	£58	Girard Freres & Co.
France,	22	Mory & Co.
Italy,	160	Sander & Knott
U. States,	95	Anglo-Am. Oil Co.
Germany,	57	M. Dk. Co.
,,	15	Craven & Co.
N. Russia,	50	M. D. Co.
Belgium,	232	R. G. Hall & Co.
,,	30	J. E. Kitton
Holland,	44	Robinson, Roberts & Co.
,,	21	Hernu, Peron & Co.
Canada,	36	Wingate & Johnston
U. States,	67	B. Galloway
France,	252	Lon. & Til. Ltge. C. & D. Co.
Germany,	280	Phillipps & Graves
Norway,	170	C. A. Nichols
Holland,	11	T. H. Lee

Glue Stock—

Holland,	28 bls.	J. Owen
,,	97	Hicks, Nash & Co.
Belgium,	24	J. E. Kitton
N. Zealand,	1	T. J. & T. Powell
Germany,	301	W. Balchin, Ld.
Belgium,	38	Leach & Co.
France,	2	E. Flageollet & Co
Sydney,	53	Anning & Cobb
Melbourne,	25	,,

Glycerine—

Holland,	£430	J. Barber & Co.
France,	320	J. W. Cook & Co., Ld.

Infusorial Earth—

Germany,	£10	L. & I. D. Jt. Co.

Kainit—

Germany,	100 t.	F. W. Berk & Co., Ld.

Manganese Ore—

Germany,	10 t.	H. Johnson & Sons

Mercury—

Spain,	10 btls.	Enthoven & Sons

Methyl Alcohol—

Germany,	68 dms.	W. Iszard

Molasses—

U. States,	2 cks.	5 c.	Davies, Turner, & Co.
,,	1,000	6,282	J. R. Francis & Co.
,,	500	2,832	J. Forsey
,,	191	1,051	Deering & Robottom

Naphtha—

Austria,	56 dms.	D. T. Domeier & Co.

Ochre—

France,	38 pks.	W. Harrison & Co.
,,	52	Taylor Brs.
,,	44	J. L. Lyon & Co.
Holland,	9	Phillipps & Graves

Oxalic Acid—

Holland,	20 pks.	R. W. Greeff & Co.

Paraffin Wax—

U. States,	100 brls.	H. Hill & Sons
,,	100	Vokins & Co., Ld.

Phosphates—

Belgium,	210 t.	Lawes Chemical Manure Co.
,,	250	R. W. Goold
France,	190	A. Hunter & Co.
,,	165	West & Penrose
U. States,	510	A. Hunter & Co.

Pitch—

N. Russia,	300 brls.	Abbey, Abbey, & Co.
,,	300	J. Batson & Co.
Holland,	68	H. Hill & Sons
Belgium,	13 cks.	Poth, Hille, & Co.

Plumbago—

Germany,	91 cks.	B. Gallaway
Ceylon,	365	J. Thredder, Son,
	110 brls.	& Co.
,,	150	Doulton & Co.
,,	30	J. Swire & Sons
,,	204	Marshall & French
Canada,	4 cks.	C. C. Wright & Co.

Potash—

France,	15 pks.	Lon. & Til. Ltge. C. & D. Co.

Potassium Carbonate—

France,	150 c.	W. E. Cole
,,	105	J. A. Reid
Germany,	360	Petri Brs.

Potassium Oxalate—

Holland,	10 pks.	R. W. Greeff & Co.

Potassium Oxychloride—

Sweden,	105 pks.	G. Boor & Co.

Rosin—

U. States,	300 brls.	Prod. Brokers' Co.
Holland,	9	J. Owen
Belgium,	100	J. Watt & Son

Salicylic Acid—

Germany,	4 pks.	Butler's Wf., Ld.

Saltpetre—

E. Indies,	635 bgs.	Perkins & Homer
,,	642	Lucas & Spencer's Wf.

Silver Chloride—

Spain,	3 cs.	H. J. Enthoven & Sons

Soap—

U. States,	£340	E. Fellingham
,,	300	L. & I. D. Jt. Co.

Soda—

Holland,	200 c.	R. W. Greeff & Co.

Sodium Prussiate—

Belgium,	52 cks.	Blagden, Waugh, & Co.

Starch—

Belgium,	817 pks.	T. H. Lee
,,	300	J. Barber & Co.
,,	80	Becker & Wagner
,,	165	Leach & Co.
,,	852	E. & T. Pink
,,	40	T. Ronaldson & Co.
,,	341	F. Claydon & Co.
,,	120	C. Tennant, Sons, & Co.
Canada,	100	,,
Germany,	1,220	Horne & Co.
,,	6	Butler's Wf., Ld.
Holland,	1,724	Little & Johnston
,,	45	Phillipps & Graves
,,	40	T. H. Lee
,,	28	Hernu, Peron, & Co.
France,	20	W. E. Cole
U. States,	102	Beck & Pollitzer

Stearine—

Belgium,	433 cks.	H. Hill & Sons

Talc—

Germany,	£9	Craven & Co.
U. States,	48	Hernu, Peron, & Co.

Tar—

Sweden,	980 brls.	Linck, Moeller, & Co.
N. Russia,	176	F. & S. Chiesman & Co.
,,	2	Aspegron & Co.
,,	250	Prod. Brokers' Co., Ld.

Tartar—

Italy,	43 pks.	Howards & Son

Turpentine—

N. Russia,	52 brls.	F. & S. Chiesman & Co.

Ultramarine—

Holland,	33 pks.	Thames S. T. & L. Co., Ld.
,,	2	Hernu, Peron, & Co.

Varnish—

U. States,	16 pks.	Williams, Torrey, & Co.
,,	10	Pinchin, Johnson, & Co.
Germany,	11	Phillipps & Graves

Verdigris—

Germany,	2 pks.	B. & F. Wf. Co., Ld.
France,	3	,,

Waste Salt—

Belgium,	5 t.	Charles & Fox

White Lead—

Belgium,	66 pks.	T. & W. Farmiloe, Ld.
,,	59	J. L. Lyon & Co.
,,	6	J. E. Kitton
,,	49	J. R. Francis & Co.
,,	23	Perkins & Homer
Germany,	25	W. A. Rose & Co.
,,	22	Taylor Brs.
,,	49	Wilkinson, Heywood, & Co.
Holland,	28	Perkins & Homer
,,	76	D. Storer & Sons
,,	1	J. Owen

Wood Pulp—

Sweden,	50 pks.	H. Johnson & Sons
,,	380	W. E. Bott & Co.
,,	50	Thames S. T. & L. Co., Ld.
,,	80	M. Dk. Co.
,,	340	J. W. Cook & Co., Ld.
Norway,	200	Alsing & Co., Ld.
,,	1,100	Johnsen & Jorgensen
,,	200	Becker & Co.

400		W. E. Bott & Co
800		Grey's Paper Mills Co.
18		Thames S. T. & L. Co., Ltd.
600		E. J. & W. Goldsmith
1,000		Caima Wood Pulp Co.
533		M. Relph
69		Henderson, Craig, & Co.

Oxide—

100 pks.		Burrell & Co.
20		Kerestedji & Co.
145		M. Ashby, Ld.
500		Soundy & Sons

LIVERPOOL.

Week ending November 3rd.

Chicory—

5 cs.		

Antimony—

193 sks.		Kleinwort, Sons & Co.

Cartons—

79 pks.		

Cases—

46 cks.		

161 bgs.		

Citric Acid—

4 cks.		

Cod Oil—

3 hf pps. 5 cs.		

Colours *(otherwise undescribed)*

65 brls.		
3 cks. 11 cs.		
1		
16 bgs.		G. J. Leslie

Drugs—

2 cs.		

Extract of Tartar—

3 bskts.		W. Bunten & Co.
15 cks.		

Gelatine—

Glucose—

Glue—

6 bgs.		M. D. Frangopulo & Co.
53 cks.		

Extracts

300 brls.		Oak Extract Co., Ld.
774		
53 cks. 200		
10 cs. 50		McArthur & Co.
62 cks.		W. I. Chemical Wks.

Gambella

243 bgs.		

Gambier

150 bgs.		
100 bgs.		J. Kitchen, Ld.
12 sks.		Morrison Pollexfen

Gum—

630 bgs.		

Indigo—

27 bgs. 20 cs.		
4 bls.		

Iodine—

50 brls.		
50		

Iodine—

4 dms.		

Lactic Acid—

9 kgs 22 brls.		E. Hickman

Manganese Ore—

2,000 t.		J. Walter & Co.

Nickel White—

400 bgs.		

Ochre—

13 brls.		Birmingham Colour Co.
70 cks.		R. J. Francis & Co.

Oil—

74 brls.		

Paraffin Scale—

660 brls.		Thompson & Bedford

Potash—

1,900 sks.		W. & H. M. Goulding
119 brls.		

Plumbago—

300 bgs.		

Potash—

10 cks.		
4 dms.		

Pyrites—

3,113 t.		Matheson & Co.
1,102		H. Bath & Son

Rosin—

3,617 brls.		

Saltpetre—

190 kgs.		

Soap—

103 cs.		
10		Evans & Co.
3		G. G. Mackay
37		
1		M. Bell
385 bxs. 42		
100		
1		
1,524		R. Singlehurst & Co.

Soap Lye—

4 cks.		A. M. Cardwell
4		H. Appleby
		80 dms.

Soapstone—

500 bgs.		
350		Geo. G. Blackwell, Sons & Co.

Starch—

116 cs.		

Stearine—

20 tcs.		

Sulphur—

13 cks. 174 brls.		
485 bgs.		

Tallow—

11 brls.		T. Nickels & Co.
225 pps.		Ldn. Brazil Bank, Ld.
1,138 hds.		
913 tcs		
43 pps. 68 hf. pps.		Col. & S. Am. F. Meat Co.
1 brl.		R. Singlehurst & Co.

Tartar—

3 cks.		

Turpentine—

100 brls.		

Ultramarine—

11 cs.		

Varnish—

20 brls.		

Waste Salt—

2,032 bgs.		

Zinc Ashes—

65 brls.		

Zinc White—

80 cks.		

MANCHESTER.

Week ending November 5th.

Acetic Acid—

70 crbys.		

Alizarine—

119 cks. 3 cs.		

Ammonium Acetate—

2 brls.		

Aniline Salts—

20 cks.		

Antimony Salts—

14 cks.		

Barytes—

100 bgs.		

Beta-Naphthol—

4 brls.		

Boracic Acid—

6 cks.		

Caoutchouc—

8 cs.		

Colours—

10 cks.		J. T. Fletcher & Co.
25		3 brls.
3		
76		38 cs.
		262 brls.

Dyestuffs *(otherwise undes.)*—

Newport News, 500 sks.		

Extracts—

86 bxs. 15 brls.		

Farina—

200 bgs.		
1,500		Browne, Geveke, & Co.
376		
750		

Glucose—

600 brls.		
400		

Glue—

20 bls.		
10 bgs.		
2 cks.		
120 bgs.		
5 cks.		10

Indigo—

3 chts.		

Logwood—

680 t.		

Manganese Ore—

31 cks.		

Ochre—

37 cks.		

Paint—

28 brls.		

Paraffin Scale—

2,042 brls.		

Potash—

20 dms.		
10 cks.		40

Soap—

1 cs.		
10		
3		

Sodium Nitrate—

3 cks.		

Sodium Phosphate—

9 cks.		

Starch—

50 brls.		
80 cs.		
1,800 bgs.		100 sks.
400		11,600
30		

Stearine—

26 bls.		

Sulphur—

20 cs.		

Tallow—

25 hds.		

Tannin—

10 brls.		

Tar Salts—

10 cks.		

Tartaric Acid—

10 cks.		

Toluidine—

11 cks.		

Ultramarine—

5 cs.		

Waste Salt—

10 kgs.		
1 ck.		qty.

Wood Pulp—

7,241 bls.		W. Gallagher & Son
400 pks.		
400		

Zinc Oxide—

25 cks.		

Zinc Sulphate—

1 brl.		

Zinc White—

25 cks.		

HULL.

Week ending November 5th.

Acids—

20 crbys.		Wilson, Sons, & Co., Ld.

Albumen—

19 cs.		
10 cks.		Helmsing & Son

Alumina Sulphate—

84 bgs.		Hull & Netherlands S. S. Co.

Antimony—

2 cks.		Wilson, Sons, & Co., Ld.

Barytes—

165 cks.		Wilson, Sons, & Co., Ld.
12		Veltmann & Co.
71		

Borax—

10 cks.		Reckitt & Sons

Chemicals *(otherwise undescribed)*

24 cks.		Wilson, Sons, & Co., Ld.
126		
18		
3		Todd & Son
1 dm.		Wilson, Sons, & Co., Ld.
12 cks.		

Colours—

10 brls.		Wilson, Sons, & Co., Ld.
5 pks.		
1 bx.		
5 cks.		
48		
120	39 cs.	2 pks.
4 bsks.		Hull & Netherlands S. S. Co.
24 brls.		
20 cks.		Wilson, Sons, & Co., Ld.

Cream of Tartar—

2 cks.		Hull & Netherlands S. S. Co.

Dyestuffs—

Alizarine

55 pks.		Hull & Netherlands S. S. Co.

Extracts

75 cks.		
50 bxs.		

Indigo

4 chts.		Hull & Netherlands S. S. Co.

Farina—

21 bgs.		Wilson, Sons, & Co., Ld.
1,000		
480 bls.		Hull & Netherlands S. S. Co.
710 bgs.		Wilson, Sons, & Co., Ld.

Gelatine—

10 cs.		Rawson & Robinson

Glucose—

80 bgs.		Hull & Netherlands S. S. Co.

Glue—

2 pks.		Wilson, Sons, & Co., Ld.
30 bgs.		
1 cs.		
8 cks.		Rawson & Robinson
100 bgs.		

Glue Stock—

126 bgs.		Wilson, Sons, & Co., Ld.

Lithopone—

20 cks.		

Manganese Borate—

1 kg.		

Nickel Salts—

2 cks.		Hull & Netherlands S. S. Co.

Ochre—

11 pks.		Veltmann & Co.
222 brls.		
2 cks.		Hull & Netherlands S. S Co.
10		Rawson & Robinson

Pitch—

50 brls.		Wilson, Sons, & Co., Ld.
58 cks.		Hull & Nether, Sons, & Co., Ld.

Plumbago—

43 cks.		Wilson, Sons, & Co., Ld.

Potash—

4 dms.		

Saltpetre—

135 bgs.		Wilson, Sons, & Co., Ld.
24 pks.		" "

Soap—

11 cs.		Wilson, Sons, & Co., Ld.

Soda—

150 bgs.		Wilson, Sons, & Co., Ld.

Starch—

50 bgs.		Hull & Netherlands S. S. Co
28 cs.		Bailey & Leetham, Ld.
80		Wilson, Sons, & Co., Ld.
100 bgs.		
2,035 pks.		Veltmann & Co.
490 cs.		

Ghent, 182 Wilson, Sons, & Co., Ltd.
New York, 2 bgs. ,,

Stearine—
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.

Tallow—
Boston, 520 brls. Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 8 cks. Hull & Netherlands S. S. Co.

Turpentine—
Bordeaux, 5 brls.

Ultramarine—
Rotterdam, 36 cks. Hull & Netherlands S. S. Co.
13 pks.

Wood Pulp—
Gothenburg, 10 bls. Wilson, Sons, & Co., Ld.
Hamburg, 360 pks. ,,

Zinc Oxide—
Rotterdam, 5 cks. Hull & Netherlands S. S. Co.

Zinc White—
Amsterdam, 35 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending November 10th.

Acetate of Lime—
Philadelphia, 555 bgs.

Acetic Acid—
Rotterdam, 7 cks. J. Rankine & Son

Arachide Oil—
Rotterdam, 2 cks. J. Rankine & Son
1 brl.

Asbestos—
Genoa, 16 cs. 15 pks.

Barytes—
Rotterdam, 45 cks.

Boracic Acid—
Leghorn, 21 cks. 12 brls.

Castor Oil—
Antwerp, 123 cks.
Marseilles, 155 cks. 18 cs.
Leghorn, 5

Chalk—
Leghorn 7 cs.

Chemicals *(otherwise unaescribed)*
Hamburg, 2 cs.

Colours—
Rotterdam, 2 cks. 11 cs. J. Rankine
3 bxs. 30 brls. 148 pks. & Son
Hamburg, 2 cks. 1 cs.

Cream of Tartar—
Bordeaux, 3 cks.
Barcelona, 4 1 brl.

Dyestuffs—
Alizarine
Rotterdam, 70 brls. J. Rankine
1 cs. & Son
Aniline
Amsterdam, 1 cs. J. Rankine & Son
Rotterdam, 5 cks. 5 ,,
Aniline Colours
Amsterdam, 1 ck. J. Rankine & Son
Hamburg, 11 cks. 3 cs.
Cutch
Rangoon, 143 bxs.
Extracts
Antwerp, 1 ck.
Baltimore, 25 brls.
Logwood
Cape Haytien, 704 t. Scott & Co.

Madder
Marseilles 14 cks.

Dyestuffs *(otherwise undes.)—*
Hamburg, 432 bgs.

Farina—
Hamburg, 1,525 bgs. J. Rankine & Son

French Chalk—
Leghorn, 6 cs.

Glucose—
New York, 300 brls.

Glue—
Rotterdam, 10 cs. J. Rankine & Son

Glycerine—
Nantes, 10 cks.
Barcelona, 20

Guano—
Drontheim, 287 bgs.

Iron Oxide—
Montreal, 68 brls.

Magnesium Sulphate—
Hamburg, 700 bgs.

Manganese—
Hamburg, 1 ck.

Nickel Ore—
Tchio, 2,500 t. Nickel Co.

Ochre—
Marseilles, 8 brls. 240 cs.

Paint—
Montreal, 80 kgs. 39 brls.

Painters' Colours—
Antwerp, 1 ck. 1 cs.

Paraffin Scale—
Rangoon, 810 bxs.

Phosphates—
Antwerp, 28 cks.

Pitch—
Marseilles, 20 cks.

Plumbago—
Genoa, 10 bgs.

Potash—
Rotterdam 44 cks. J. Rankine & Son

Potassium Oxalate—
Rotterdam, 1 ck. J. Rankine & Son

Pyrites—
Huelva, 1,637 t. Tharsis Sulphur & Copper Co.

Saltpetre—
Hamburg, 28 cks.

Soap—
New York, 2,500 bxs.
Genoa, 62 cs.
Marseilles, 1

Soap Lyes—
Marseilles, 20 cks.

Soda—
Genoa, 30 brls.

Sodium Chlorate—
Marseilles, 9 cks.

Sodium Phosphate—
Antwerp, 14 cks.

Starch—
Baltimore, 300 bgs.
Rotterdam, 40 cs. J. Rankine & Son

Stearine—
New York, 150 brls.
Philadelphia, 75 cs.
Amsterdam, 164 bgs.

Talc—
Marseilles, 150 bls.

Tallow—
New York, 150 tcs.

Tartar—
Bordeaux, 5 cks.

Tartaric Acid—
Rotterdam, 44 cks. J. Rankine & Son

Tin Oxide—
Rotterdam, 2 cks. J. Rankine & Son

Varnish—
New York, 30 brls.
Antwerp, 1 kg. 2 cs.

Waste Salt—
Hamburg, 1,000 bgs.

White Lead—
Amsterdam, 68 pks. J. Rankine & Son

Wood Pulp—
Drontheim, 400 bls.
Hamburg, 62 reels
Christiania, 2,807 bls. 10 cs.

Zinc Oxide—
New York, 100 brls.
Antwerp, 30 cks.
Rotterdam, 20 J. Rankine & Son

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son
10 pks.

TYNE.

Week ending November 5th

Barytes—
Antwerp, 350 bgs. Tyne S. S. Co.
Rotterdam, 100 ,,

Dyestuffs *(otherwise unaescribed)*
Antwerp, 475 bgs. Tyne S. S. Co.

Glue—
Phil'delphia, 30,245 lbs. Anglo-American Oil Co.
Rotterdam, 5 cs. Tyne S. S. Co.

Limestone—
Antwerp, 2 crts. Tyne
5 cs. S. S. Co.

Paint—
Philadelphia, 9,702 lbs Anglo-American Oil Co.

Paraffin Scale—
New York, 30 bdls. Furness, Withy, & Co.

Phosphates—
Dunkirk, 180 t.

Soap—
Rotterdam, 6 cs. Tyne S. S. Co.

Starch—
Antwerp, 88 cs. Tyne S. S. Co.
Rotterdam, 30 ,,

Stearine—
Antwerp, 7 bgs. Tyne S. S. Co.
Rotterdam, 13 bls. ,,

Waste Salt—
Hamburg, 450 t. Clephans & Wiencke

Wood Pulp—
Christiania, 2,032 bls.
Gothenburg, 30
Laurvig, 25

Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.
Rotterdam, 20 cks. ,,

GOOLE.

Week ending November 2nd.

Acetate of Lime—
Hamburg, 1 ck.

Alizarine—
Rotterdam, 125 cks. 6 cs.

Alkali—
Calais, 5 cks.

Aniline—
Rotterdam, 231 cks. 41 cs.

Barytes—
Antwerp, 40 bgs.

Caoutchouc—
Boulogne, 1 bg. 8 cks. 1 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 5 cs.

Colours—
Hamburg, 17 cs.

Dyestuffs *(otherwise undes.)—*
Amsterdam, 2 cks. 2 cs.
Antwerp, 662 bgs.
Boulogne, 6 cks. 4 81 pks.

Extracts—
Amsterdam 10 cs.

Farina—
Delfszyhl, 100 bgs.
Hamburg, 50

Logwood—
Belize, 455 t.

Phosphate—
Calais, 2,030 bgs

Potash—
Antwerp, 2 cks.
Calais, 7 dms.
Hamburg, 10

Potassium Sulphate—
Dunkirk, 40 dms.

Saltpetre—
Hamburg. 25 cks.

Sodium Hyposulphate—
Rotterdam, 12 cks.

Varnish—
Antwerp, 22 dms.

Waste Salt—
Hamburg, 435 cks. 747 bgs.

GRIMSBY.

Week ending November 5th.

Albumen—
Hamburg, 5 cks.

Caoutchouc—
Antwerp, 12 cs.

Chemicals *(otherwise undescribed)*
Antwerp, 2 cs.
Hamburg, 31 2 cts.

Colours—
Antwerp, 14 cks. 106 pks.
Hamburg, 29 4 cs. 9
Rotterdam, 1 bx. 17

Farina—
Hamburg, 50 bgs.

Glue—
Hamburg, 5 cks.

Pitch—
Hamburg, 53 cks.

Plumbago—
Hamburg, 16 cks.

Soap—
Rotterdam, 160 cs.

Starch—
Antwerp, 8 cs.

Varnish—
Antwerp, 6 cs.

Zinc Ashes—
Antwerp, 1 ck.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 9th.

Acids—
Malta, 6 cs. £27
New York, 50 80

Alkali—
Rockhampton, 5 t. 7 c. £20
Rosario, 14 20

Ammonia (Anhydrous)—
Cape Town, 6 cyldrs. £38

Ammonium Carbonate—
Stockholm, 17 c. £21
Riga, 2 t. 7 78
Stettin, 3 5 76
Antwerp, 1 12
Subeck, 11 12
Hiogo, 10 cs. 47

Ammonium Chloride—
Batoum, 9 c. £15
Varna, 9 13
Trebizonde, 1 t. 12 53

Ammonium Sulphate—
Marseilles, 15 t. 16 c. £150
Hamburg, 80 760
Barcelona, 170 12 1,706
Valencia, 219 9 2,199
Demerara, 119 8 1,189

Arsenic—
Wellington, 10 c. £11

Bleaching Powder—
Pt. Elizabeth, 3 t. 10 c. £35

Borax—
Fremantle, 1 t. £14

Caustic Soda—
Auckland, 4 t. 18 c. £41
Durban, 1
E. London, 19
Delagoa Bay, 12
Philadelphia, 134

Chemicals *(otherwise undescribed)*
Lisbon, 3 cs. £
Karachi, 3 4 cs. (pt.)
Pt. Elizabeth, 6 pks.
B. Ayres, 4
Madras, 2 kgs. 60
Toronto 27 cks.
Auckland, 33 pks. (pt.)

Wellington, 75 — 154
Colombo, — 11 cs. 239
St. Petersburg, 15 kgs. — 89
Amsterdam, 20 — 25
Brussels, — 12 84
Boulogne, 7 cks. — 70
St Michael's, — 8 16
Hamburg, — 21 272
Cape Town, — 4 22
Bombay, 8 — 33
Fremantle, — 6 41
Montreal, — 82 186
Demerara, — 149 40
Melbourne, — 45 152
Rosario, 10 — 35
Paris, 15 — 25
Genoa, { 3 / 25 kgs. — 228
Malta, — 7 31

Citric Acid—
Pt. Elizabeth, — 4 c. £28
Durban, 1 — 7
Auckland, 3 — 21
E. London, 2 — 14
Rotterdam, 10 — 65
Libau, 5 — 42

Coal Products—
Alizarine
St. Petersburg, — 17 cs. £840
Ghent, 6 cks. — 25
Hamburg, 2 — 12
Amsterdam, 3 — 21
Aniline
Boulogne, 1 ck. — £9
Aniline Oil
Barcelona, — 6 brls. £65
Aniline Salts
Barcelona, — 10 brls. £60
Anthracene
Rotterdam, 358 cks. — £1,002
Astatki
Durban, — 5 brls. £6
Benzol
Treport, 30 cks. — £56
Carbolic Acid
Montreal, 15 cks. — £113
Philadelphia, 15 — 112
Calcutta, — 100 drms. 46
Rotterdam, — 4 cs. 80 612
Boston, 25 — 181
Fremantle, — 20 7
Trinidad, — 46 pks. 50
Creosote
New York, 500 cks. — £353
Newport News, 500 — 353
Helsingfors 50 — —
Dyes
Boston, 9 cks. — £98
Melbourne, — 1 cs. 13
Naphtha
Melbourne, — 50 cs. £93
Naphthaline
Malta, 1 kg. — £5
Rotterdam, 100 bgs. — 55
Pitch
Helsingfors, 150 t. — —
Antwerp, 1,919 — £2,178
Hamburg, — 50 brls. 60
Delagoa Bay, 20 kgs. — 6
Pyridine
Stettin, 10 cks. — £112
Pyridine Bases
Hamburg, — 6 drms. £165
Tar
Pt. Elizabeth, — 550 drms. £21
Helsingfors, 1,900 cks. — —
Durban — 170 24
Delagoa Bay, — 200 24
Wellington, 11 — 20 13

Copper Sulphate—
Brisbane, 14 t. 3 c. £222
Venice, 6 10 160
Cape Town, 1 — 18
Amsterdam, 10 — 168

Cream of Tartar—
Auckland, — 11 c. £44
Yokohama, 1 t. 1 84
Fremantle, — 10 36

Disinfectants—
Melbourne, — 164 pks. 85
Pt. Elizabeth, 100 cks. 8 cs. 83 125
Colombo, — 23 20
Rotterdam, — 17 13
Swatow, — 25 drms. 11
Penang, — 173 54
New York, — 35 32

Glycerine—
New York, 26 t. 6 c. £775

Guano—
Venice, — 6 c. £10
Bombay, 1 t. 2 31

Manure—
Adelaide, 500 t. — £1,366
Riga, 50 13 c. 125
Morlaix, 135 — 840
Demerara, 72 16 650
Barbadoes, 4 14 26
Cape Town, 320 — 4,200
Jersey, 92 — 618
Treport, 20 — 55
Hamburg, 10 — 25

Oxalic Acid—
Konigsberg, 2 t. 11 c. £110

Phosphorus—
Wellington, — 4 cs. £35
Oporto, — 6 58

Phosphorus (Amorph.)—
Philadelphia, — 5 cs. £58

Potash Salts—
Auckland, 8 t. 14 c. £550

Potassium Chlorate—
Madeira, — 6 c. £12
Auckland, — 4 8

Potassium Cyanide—
Sarawak, — 20 cs. £205
Calcutta, — 5 22
Delagoa Bay, — 1.8 1,218
Madras, — 4 c. 21

Potassium Prussiate—
Rotterdam, 16 cks. — £286

Saltpetre—
Madeira, — 5 c. £6
Syra, 6 t. 17 131

Sheep Dip—
San Francisco, 17 t. 4 c. £450
Melbourne, 18 17 200 dms. 750
Wellington, 4 14 85
Durban, 1 12 30
Pt. Elizabeth, 6 — 125
B. Ayres, { 53 / 2 / 750 cs. 3,214
New York, 12 20 25

Soda—
Durban, 1 t. 5 c. £11
Pt. Said, 1 2 6
Montreal, 1 10 80

Soda Crystals—
Durban, 3 t. 5 c. £10

Sodium Bicarbonate—
Philadelphia, — 6 c. £6

Sodium Cyanide
Montreal, — 2 cs. £10

Sodium Nitrate—
Rockhampton, 50 t. 18 c. £413
Hiogo, 15 1 121

Sodium Silicate—
Wanganui, 4 t. 5 c. £19

Sodium Tartrate—
Montreal, — 11 c. £34

Sulphur—
Pt. Elizabeth, 125 kgs. — £51

Sulphuric Acid—
Hiogo, — 9 cs. £20
Durban, — 10 19
Cape Town, 4 t. 10 c. 40
Gibraltar, — 10 5

Superphosphates—
Auckland, 70 t. — £210

Tartaric Acid—
Pt. Elizabeth, — 2 c. £14
Cape Town, — 11 60
Auckland, — 4 25
Adelaide, — 5 26
Durban, — 2 12

LIVERPOOL.

Week ending November 9th.

Acetic Acid—
Pasages, — 13 c. £15

Alkali—
Callao, 1 t. 5 c. £26
Odessa, 15 12 3 q. 62
Boston, 12 15 102
Vera Cruz, 3 2 3 13
Montreal, 10 2 3 41
Natal, 5 — — 23
Madeira, 7 15 2 31
San Sebastian, 9 18 1 40
Malaga, 10 — — 45
Valencia, 55 8 — 242
Barcelona, 7 14 — 31

Alum—
Barcelona, 1 t. 9 c. 1 q. £14
Toronto, 3 13 1 18
Geelong, 1 12 — 8
Melbourne, 5 — — 28
Volo, 1 10 — 7
Galatz, 2 — 3 9½
Cape Town, — 16 3 4½
Bari, 2 — 3 10

Aluminous Cake—
Melbourne, 6 t. 16 c. 2 q. £18

Ammonium Carbonate—
Rotterdam, — 10 c. £11
Fairwater, 1 t. 10 41
Venice, 2 — — 52
Gothenburg, 1 — — 30
Barcelona, 1 — — 30
Marseilles, — 17 — 39
Hamburg, 4 5 — 139
Odessa, 5 — — 128
Vera Cruz, — 4 — 5
Libau, — 10 — 13

Ammonium Chloride—
Hamburg, — 5 c. £7
Volo, 1 t. — — 32
Barcelona, 1 1 — 36
Vera Cruz, — 4 — 6
Galatz, 1 — — 30

Ammonium Sulphate—
Bilbao, 56 t. — — £545
New York, 25 15 c. — 257
Castellon, 85 11 — 807
Gandia, 76 6 1 q. 725
Barcelona, 50 10 — 453
Cadiz, 10 3 — 98
Demerara, 59 15 3 599
Valencia, 177 18 1 1,755
Sierra Leone, 51 2 1 500
Bordeaux, 29 9 — 293
Las Palmas, 50 10 — 505
Sourabaya, 36 19 1 365
Samarang, 178 16 2 1,698
San Francisco, 198 13 — 1,986
Lisbon, 9 16 — 97
Venice, 24 19 — 225
Antwerp, 25 — — 230
Gd. Canary, 47 — — —

Antimony Sulphide—
New York, 2,600 lbs. — — £65

Basic Slag—
Cape Town, 100 t. — — £215
Melbourne, 47 — — 106

Bleaching Powder—
Alicante, 3 cks. — — —
Amsterdam, 83 — — —
Ancona, 35 — — —
Antwerp, 30 — — —
Barcelona, 14 — — —
Bilbao, 30 — — —
Bombay, — 8 cs. — —
Boston, 326 — — —
Calcutta, — 110 — —
Genoa, 36 — — —
Hamburg, 1 — — —
Lachute, 15 — — —
Leghorn, 3 — — —
Montreal, 27 15 brls. — —
New York, 321 20 — —
Oporto, 8 — — —
Philadelphia, 327 — — —
Piræus, 6 — — —
Rio de Janeiro, 16 — — —
Rotterdam, 37 — — —
Syra, 4 — — —
Tampico, — 17 — —
Melbourne, — 7 c. — £8
Hong Kong, — 12 2 q. 6

Boracic Acid—
Hamburg, 5 t. 6 c. 2 q. £133

Borax—
Rotterdam, 5 t. 7 c. — £76
Hamburg, 1 — 2 q. 15
Vancouver, — 14 2 16
Gothenburg, 1 1 2 15
Hankow, 1 7 — 21
Adelaide, — 10 — 7
Santander, — 10 — 8
Montreal, 29 17 — 433
Havana, — 15 3 11

Calcium Chloride—
New York, 9 t. — 3 q. £20
Montreal, 10 2 c. — 23
M. Video, 3 — — 7

Carbolic Acid—
Baltimore, — 18 c. 1 q. £50
New York, 3 t. 7 3 231
Genoa, — 9 3 32
Odessa, — 4 3 18
Braila, — 1 — 5
Madras, 1 10 — 10

Caustic Potash—
Sydney, 2 t. 2 c. — £71
Melbourne, 3 4 — 96

Caustic Soda—
Alexandretta, 50 dms. — — —
Ancona, 20 — — —
Antwerp, 25 — — —
Bari, 89 — — —
Barcelona, 437 11 cks. — —
Batavia, 43 — — —
Bilbao, 247 — — —
Bombay, 20 — — —
Boston, 30 — — —
Bremen, — 5 brls. — —
B. Ayres, 60 — — —
Callao, 100 — — —
Cartagena, Sp., 10 — — —
Cartagena, N.G., — 15 cks. — —
Catania, 18 — — —
Colombo, 12 — — —
Coquimbo, 10 — — —
Corral, 20 — — —
Fremantle, 20 — — —
Galatz, 30 — — —
Genoa, 134 — — —
Hamburg, 60 — — —
Havana, 20 — — —
Hiogo, 250 — — —
Hong Hong, 20 — — —
Ibrail, 35 — — —
Kurachee, 60 — — —
Leghorn, 70 — — —
Libau, 13 — — —
Lisbon, 20 — — —
Malaga, 20 — — —
Marseilles, 20 — — —
Melbourne, 45 — — —
Mexico, 54 — — —
M. Video, 160 — — —
Montreal, 100 100 brls. — —
Nagasaki, 100 — — —
Nantes, 30 — — —
New York, 200 100 — —
Odessa, 620 — — —
Oporto, 30 — — —
Paysunda, 75 — — —
Penang, 10 — — —
Pernambuco, 24 — — —
Philadelphia, 50 — — —
Porto Algre, 50 — — —
Quebec, 125 — — —
Rio G. do. Sul, 25 — — —
Rotterdam, 75 — — —
Rouen, 26 — — —
Samarang, 10 — — —
Savanilla, 10 — — —
Seville, 446 125 kgs. — —
Sydney, 45 — — —
Tampico, 35 — — —
Tarragona, 50 50 bgs. — —
Toledo, 50 — — —
Toronto, 50 — — —
Trieste, 35 — — —
Valencia, — 53 pks. — —
Valparaiso, 25 — — —
Vera Cruz, 20 — — —
Wellington, 35 — — —
Woodstock, 100 — — —

Chemicals *(otherwise undescribed)*
Stettin, 3 t. — — £95
Rotterdam, — 10 c. — 10
Yokohama, 5 — — 285
Odessa, 3 — 1 q. 77
Philadelphia, 13 3 — 257
Havana, 37 hf. tcs. — — 12

China Clay—
Baltimore, 410 cks. — — —
Barcelona, 100 — — —
Boston, 564 — — —
Madras, 80 — — —
Melbourne, 20 — — —
Montreal, 725 — — —
Naples, 40 — — —
Newport News, 567 — — —
Philadelphia, 249 — — —
Torino, 40 — — —
Yokohama, 8 — — —

Citric Acid—
Lisbon, — 4 c. — £27

Coal Products—
Creosote
San Francisco, 500 cks. — — —
Creosote Oil
Bordeaux, 241 cks. — — —
Pitch
Antwerp, 202 t. — — —
St. Nazaire, 258½ — — —
Callao, 20 hf. brls. — — —
New York, — 10 brls. — —
Penang, 20 cks. — — —
Tar
Philadelphia, 100 brls. — — —
San Francisco, 200 — — —
Galatz, 25 — — —
Tar and Pitch
Colombo, — 13 cs. — —

Copperas—
Varna, 3 t. 3 c. 2 q. £6
Tripoli, 30 cks. — — 45

Copper Sulphate—
Catania, 16 t. — — £272
Rio de Janeiro, — 5 c. 3 q. 5
Genoa, 20 — 2 330
Bourgas, 1 — — 17
Melbourne, 1 — — 16
Smyrna, 2 — — 35
Calcutta, 5 — — 81
Kurachee, 1 — — 16

Cream of Tartar—
Belize, — 2 c. 1 q. £9

Disinfectants—
New York, 1 c. 3 q. £7
Madras, 1 10 24
Melbourne, 1 11 17

Dried Blood—
Marseilles, 51 t. £340

Dyestuffs—
Aniline Colours
Callao, 2 kgs.
Canada, 2 cks.
New York, 7
Extracts
Barcelona, 14 cs.
Cornwall, 50 cks.
Hespeler, 7
New York, 75 5 kgs.
Pirœus, 10 c.

Dyestuffs (*otherwise undescribed*)
Boston, 10 cks.

Glycerine—
Montreal, 4 t. 13 c. 3 q. £245
Genoa, 2 10 2 96
Hamburg, 23 11 3 960
Valparaiso, 8 29

Magnesia—
Barcelona, 7 cs.
Pernambuco, 4
Stettin, 4 tcs.
Vera Cruz, 14

Magnesium Chloride—
Genoa, 7 t. 15 c. £18

Manure—
Guernsey, 55 t. £340
Santa Cruz, 13 126
Las Palmas, 9 16 c. 97

Oxalic Acid—
Gothenburg, 7 c. £10

Paint—
Arajutla, 3 cks.
Belize, 107 pks.
Boca, 32 cs.
Calcutta, 70 dms.
Callao, 145 10 brls.
Cartagena, N.G. 20 crts.
Constantinople, 20 cks. 4 dms.
Copenhagen, 60 kgs.
Curacoa, 6
Hong Kong, 50
Iquitos, 7 cks. 1 cs.
Kingston, 75 kgs.
Lima, 60 cs.
Manaos, 6
M. Video, 12 26
Nassau, 6 25 kgs.
Para, 6
Pt. Antonia, 4 12
Rangoon, 20
Rio de Janeiro, 200
Riza, 116
St. Croix, 277
Sierra Leone, 100
Valparaiso,

Painters' Colours—
Callao, 19 cs.
E. London, 125 brls. 229 pks.
Haliford, 8 kgs
Havana, 2
Lisbon, 2 cks. 32
Montreal, 2
New York, 52
Para, 6 2 cs.
Pernambuco, 40 kgs. 98
Philadelphia, 11 brls.
Rio de Janeiro, 1 cs.
St. John's, 8 cks.
San Francisco, 102 dms.
Santos, 1
Tampico, 78 pks.
Truxillo,

Paraffin Wax—
Barcelona, 10 cks.
Callao, 31 bgs.
Cephalonia, 5
Genoa, 183
Leghorn, 231
Lisbon, 5
Naples, 300
Para, 21 cs.

Phosphates—
Hamburg, 4[illegible] 3[illegible] 2 q. £217

Phosphorus—
[illegible] £92
[illegible] 70
[illegible] 1 t. 8 233

Picric Acid—
[illegible] 2 t. £180

Potash Salts—
[illegible] 18 t. 7 c. 1 kg. £1,610

Potassium Bichromate—
[illegible] 8 c. £6
[illegible] 1 t. 6 58
[illegible] 218

Marseilles, 1 32
Oporto, 1 ck. 9

Potassium Carbonate—
Rio de Janeiro, 16 c. 1 q. £13
New York, 11 t. 2 208

Potassium Chlorate—
Hamburg, 1 t. 6 c. £39
Konigsberg, 15 23
New York, 5 130
Sydney, 2 60
Varna, 7 10
Genoa, 1 30
Shanghai, 5 170

Potassium Prussiate—
Barcelona, 2 t. 7 c. 2 q. £134
Constantinople, 8 1 29
Genoa, 2 9 145

Salt—
Antwerp, 150 t.
Baltimore, 100
Barbadoes, 83 7 c.
Belize, 12
Bombay, 65 cs.
Boston, 500 sks.
B. Ayres, 36 t. 11 50
Calcutta, 3,358
Cape Palmas, 25
Egwanga, 10
Ghent, 50
Gd. Lahou, 12 10
Hamilton, 40
Iquitos, 19 9
Jersey, 200
Kingston, 25
Lagos, 100
Limon, 5
Loango, 10
Melbourne, 148 16 50
Monrovia, 7 10
M. Video, 13 7 30
Montreal, 1,315
Newfairwater, 411
New York, 121
Old Calabar, 80
Portland, Or., 299 16
Rio de Janeiro, 2
Rio G. Do Sul, 34 14
Rio Munez, 100
Salt Pond, 12 10
San Francisco, 173 4
Sierra Leone, 37 10
Stockholm, 154 12
Sydney, 100
Victoria, B. C., 110

Salt Cake—
Antwerp, 50 t. £53
Gefle, 147 190
Hong Kong, 2 10 c. 7
Lisbon, 30 50

Saltpetre—
Malta, 6 c. £7
Para, 2 t. 41
Pernambuco, 8 11 1 q. 180

Sheep Dip—
Bahia Blanca, 500 cs. £725
B. Ayres, 49 t. 2 q. 648
M. Video, 2 4 c. 1 69

Soap—
Aden, 50 bdls.
Alexandria, 100 bxs.
Algoa Bay, 582 150 cs.
Auckland, 500
Barbadoes, 600
Bathurst, 60
Bloemfont in, 10
Boma, 10
Bombay, 710
Boston, 3 cks. 25 pks.
Cabenda, 50 bxs.
Buluwayo, 5
Cairo, 40
Calcutta, 169
Cape Gracias, 112
Canaria, 675
Cape Lopez, 80
Cette, 40
Christchurch, 400
Colombo, 41
Colon, 500
Conakry, 62
Constantinople, 10
Curacao, 255
Delagoa Bay, 105
Demerara, 500
Dixcove, 52
Dunedin, 700
Durban, 38
Gaboon, 200
Galata, 20
Germiston, 50
Gibraltar, 50
Greytown, 700
Guadeloupe, 2,000
Honolulu, 100
Iquitos, 250
Johannesburg, 65
Kingston, 70
Kotonou, 30
Lanzarote, 10
Larnaca, 10
La Paz, 4
Loango, 50 1
Lucknow, 18
Madras, 30 15
Malta, 20
Manaos, 150
Mandiji, 25
Matadi, 250
Mauritius, 500
Melilla, 320
Montreal, 500
Montserrat, 15
M'Pongue, 30
New York, 46
Old Calabar, 500
Opobo, 4,000
Oporto, 1
Palma, 224
Para, 1
Penang, 37 225
Pietermaritzburg, 100
Pt. Natal, 38 100
Pretoria, 5
Principulca, 40
Punta Arenas, 50
Rangoon, 600 15
Rosario, 1
Rotterdam, 359
St. John's, 50 31
St. Pierre, 200
Salonica, 50
Samarang, 2
Shanghai, 1,010
Toronto, 1,116
Trinidad, 850
Ukuka, 50
Warri, 100
Wellington, 50 700
Yokohama, 5

Soap Lye—
Hamburg, 40 dms.
New York, 60
Rotterdam, 160

Soda Ash—
Boston, 35 cks.
B. Ayres, 329 brls.
Copenhagen, 430 bgs.
Genoa, 1,900
Hamburg, 20 20
Hong Kong, 71
Leghorn, 60
Montreal, 360 19 tcs. 21
Naples, 156
New York, 15 bxs. 13
Oporto, 19
Paysandu, 50
Perth, 65
Philadelphia, 2,020 bgs.
Pt. Elizabeth, 188
Pt. Natal, 40 kgs.
Porto Alegre, 10
Preston, 107 bgs.
Rosario, 50
Rotterdam, 40
San Sebastian, 100 11
Stettin, 200
Syra, 60 brls.
Sydney, 68 285 3 tcs.
Toronto, 750
Trieste, 100 kgs.
Venice, 100 bgs.

Soda Crystals—
Barcelona, 10 cks.
Calcutta, 2
Malta, 70 brls.
M. Video, 50 50
Montreal, 300 bgs. 10 308 300 kgs. 440 pks.
New York, 178
Penang, 10 cks.
Quebec, 450 pks.
Shanghai, 20
Toronto, 100 cks.
Yokohama, 200

Sodium Bicarbonate—
Aleppo, 10 cks.
Ancona, 53 kgs. 5
Antwerp 35 2
Barcelona, 300
Bombay, 100 bgs.
B. Ayres, 18
Callao, 4
Fremantle, 90 kgs.
Galatz, 54
Genoa, 40 6
Gijon, 10
Havana, 30
Johannesburg, 24
Messina, 20 10 dms.
M. Video, 45
Montreal, 100 bgs. 635 kgs. 300 dm
Odessa, 100
Palermo, 27 bgs.
Philippeville, 50 kgs.
Pt. Natal, 40
Rangoon, 125
Rotterdam, 30
Rouen, 252
Santos, 100
Smyrna, 20
Stettin, 54 pk
Sydney, 150 bgs. 100 kgs.
Tampico, 220
Toronto, 225
Trieste, 30
Valencia, 50 6 ck
Vancouver, 8
Varna, 20
Venice, 30
Vera Cruz, 20
Yokohama, 1,000

Sodium Chlorate—
Hamburg, 3 cks.

Sodium Hyposulphite—
Callao, 200 kgs.
San Francisco, 490

Sodium Silicate—
Las Palmas, 8 brls.
Nantes, 3 dm

Sodium Sulphate—
Montreal, 38 cks.

Starch—
Barcelona, 10 bgs.

Sulphur—
Boston, 75 t. 3 c.
B. Ayres, 10 2 q.
Calcutta, 15
Copenhagen, 45
New York, 1
Norrkoping, 50
Portland, Me., 31 4

Sulphuric Acid—
Calcutta, 500 glns.
Callao, 1 t. 2 c.
Rio de Janeiro, 2

Superphosphates—
Cullera, 30 t.
Gd. Canary, 36
Nantes, 48 16 c.

Tannic Acid—
Lisbon, 4 c. 1 q.

Tartaric Acid—
St. Nazaire, 5 c. 3 q.

Varnish—
Barcelona, 2 cs.
Batavia, 5
Callao, 2
Catania, 1
Constantinople, 1
Montreal, 10
Naples, 1 ck. 6
Osaka, 6 brls.
Rotterdam, 2 cs.
Truxillo, 2

White Lead—
Pt. Natal, 1 ck. 60 kgs.

Zinc Chloride—
Libau, 5 t. 2 q. £

MANCHESTER

Week ending November 9th.

Alumina Acetate—
France, 2 cks.

Aniline Colours—
Germany, 1 cs.
Holland, 1

Bleaching Powder—
Rio de Janeiro, 12 cs.

Carbolic Acid—
France, 1 cs. 50 bls.

Caustic Soda—
Germany, 30 dms.
Rio de Janeiro, 8

Chemicals (*otherwise undescribed*)
Hamburg, 6 kgs.
Rotterdam, 5 cks.

Coal Products—
Aniline Oil
Germany, 5 tins 10 dms.
Aniline Salts
Germany, 20 cks.
Naphthylamine
Germany, 29 cks.
Paranitraniline
Germany, 2 kgs.
Pitch
Belgium, 4,115 c.

10 brls.

1 ck.
1

1 ck.

1 bx.

um Sulphate—
30 bgs.

Wax—
101 cs.

5 cs.

Naphthionate—
33 bgs.
44 cks.

24 bxs.

HULL.

ending November 5th.

g Powder—
137 cks.
66

ls *(otherwise undescribed)*
24 btls. 24 brls.
30 cks.
5
12 pks
2,540 slbs.
6 cs.
8
13 366
10
22
10
10 pks.
16 93
18
110
46
178 12
120 bgs. 6
29 cks.

ed Oil—
808 c.
765
101
227
1,093
164
1,153
421
105

3 cks.

43 cks.

s *(otherwise undescribed)*
3 cks.
1
20 bgs.
2 cks.

Oil—
27 c.
220
20
119
157

20 cks.

2 cs.

' Colours—
1 ck.
9
9 2 cs.
9 dms
11 1 28 pks.
2 3
1
4 2
1
34 125
2 51
19 2
1
4 2

1,675 t.

219 t.

25 cs.
10
1
50
18 cks.
1

Tallow—
Rotterdam, 5 cks.
St. Petersburg, 51

Tar—
Antwerp, 33 brls.
Copenhagen, 10
Hamburg, 3 cks.
Helsingfors, 50
Stockholm, 1 dm.

Varnish—
Danzig, 1 cs.
Stockholm, 2
St. Petersburg, 6

GLASGOW.

Week ending November 10th.

Acids—
Trinidad, £34 10s.

Ammonium Carbonate—
Montreal, £32
Stavanger, 8

Ammonium Sulphate—
Baltimore, 179 t. 2 c.
France, 50 14¾
Genoa, 72 19¾
Hamburg, 40 10
Italy, 98 13¾
Nantes, 69 16
New York, 25 13½
Philadelphia, 25 14
Rotterdam, 30 7

Argols—
Canada, £38 18s.

Bones—
Rouen, £40

Boracic Acid—
Adelaide, £23 10s.

Borax—
Melbourne, £52
Montreal, 278
Rotterdam, 16

Caoutchouc—
Amsterdam, £42
Rotterdam, 57

Carbolic Acid—
Christiania, £5 10s.
Rotterdam, £110

Chalk—
B. Ayres, £44

Chemicals *(otherwise undescribed)*
Montreal, £125
Rotterdam, 21
Trinidad, 22

Coal Products—
Creosote Oil
Christiania, £26
Pitch
Antwerp, 500 t. £170
Calcutta, 56
Canada, 234
Christiania, 14
Danzig, 105 10 c.
Gothenburg, 152
Hamburg, 11 14
Rotterdam, 12 13
Tar
Calcutta, £250
Canada, 295
Christiania, 33
Drontheim, 11 t.
Montreal, 80
Madras. £32 10s.
Tar Oil
France, £80
Tar and Pitch
Canada, £218

Dyestuffs *(otherwise undescribed)*
Belgium £100

Extracts—
Canada. £500 19s
Stockholm, £450
Victoria, 51

Gelatine—
Canada, £465
New York, 261

Iodine—
Rotterdam, £1,251

Lead Acetate—
Bombay. £90

Lead Nitrate—
Canada, £95

Linseed Oil—
Canada, 23 t. 5½ c.
Dunedin, 1 12
Italy, 163¾
Trinidad, 2 3¾

Logwood—
Canada, £113

Manganese (Recovered)—
Basle, £105
Rotterdam, 180

Manure—
Kingston, Ja., 10 t.

Paint—
B. Ayres, £85
Calcutta, 25
Canada, 50
Mauritius, 20
M. Video, 20

Painters' Colours—
Adelaide, £79
Algoa Bay, £23 14s.
Melbourne, £88
Montreal. 488
Philadelphia, 51
Rotterdam, 9
Trinidad, 67

Paraffin Wax—
Amsterdam, £53
Algoa Bay, 31
Bordeaux, 119
Christiania, 60
Genoa, £33 10s.
Italy, £383
Leghorn, 81
Marseilles, 73

Potassium Bichromate—
Amsterdam, £312
Antwerp, 67
Bombay, 104
Madras. 138
Melbourne, 133
Montreal, 119
Philadelphia, 791
Quebec, 196
Rotterdam, 408

Potassium Prussiate—
Amsterdam, £25

Red Lead—
Calcutta, £59
Canada, 52

Salt—
Trinidad, 27 t. 2 c.

Sheep Dip—
B. Ayres, £175

Soap—
Transvaal, 3 t. 5 c.
Trinidad, 1 8

Sodium Bichromate—
Bombay, 2 t. ¾ c.

Starch—
Rotterdam, £315

Sulphur—
Trinidad, £55

Tallow—
Brussels, 3 t. 17 c.
Hamburg, 5 1
Italy 30 7¾
Rotterdam, 8
Trinidad, 2 1½

Turmeric—
Canada, £21

Waste Salt—
Baltimore, 150 t.

TYNE.

Week ending November 5th.

Alkali—
Rotterdam, 4 t.
St. Petersburg, 40 8 c.

Alum Waste—
Aarhuus, 22 t. 7 c.

Ammonium Carbonate—
Hamburg, 1 t. 6 c.

Ammonium Sulphate—
St. Petersburg, 20 t.

Antimony—
Antwerp, 2 t.
Hamburg, 6
Montreal, 4
Rotterdam, 2

Barium Binoxide—
Antwerp, 9 t. 15 c.
Rotterdam, 9 14

Barium Carbonate—
St. Petersburg, 80 t. 15 c.

Blanc Fixe—
Montreal, 12 t. 11 c.

Bleaching Powder—
Antwerp, 22 t. 14 c.
Copenhagen, 7 3
Drontheim, 9 19
Hamburg, 30 3
Ghent, 25 3
Rotterdam, 27 1
St. Petersburg, 131 3

Castor Oil—
Montreal, 10 t. 2 c.
Rotterdam, 1 1

Caustic Soda—
Antwerp, 5 t. 4 c.
Christiania, 5 16
Copenhagen, 7 10
Hamburg, 1 16
Montreal, 117 3
St. Petersburg, 66 18
Venice, 29

Litharge—
Montreal, 75 t. 9 c.

Magnesia—
Genoa, 5 c.
Hamburg, 15

Manganese—
Gothenburg, 10 t.

Paint—
Antwerp, 14 c.

Painters Colours—
Hamburg, 41 cks. 11 dms.

Phosphorus—
Valencia, 1 t. 17 c.

Soda—
Christiania, 15 t. 6 c.
Rotterdam. 30 1
Venice, 9 18

Soda Ash—
Bergen, 10 t.

Sodium Hyposulphate—
Montreal, 20 t.

Sodium Prussiate—
St. Petersburg, 5 t. 2 c.

Superphosphates—
Genoa, 100 t. 1 c.

Superphospha'es (Ammoniated)
Valencia, 533 t.

White Lead—
Montreal, 83 t. 6 c.

GOOLE.

Week ending November 2nd.

Alkali—
Boulogne, 2 cks.

Chemicals *(otherwise undescribed)*
Boulogne, 1 ck.
Ghent, 8
Rotterdam, 1 cs.

Coal Products *(otherwise undes.)—*
Amsterdam, 50 cks.
Boulogne, 55
Ghent, 12 tins 2 dms.
Rotterdam, 6 cks.

Dyestuffs *(otherwise undescribed)*
Ghent, 2 cks.
Hamburg, 60 bgs. 44 cks.

Logwood—
Hamburg, 80 bgs.

Manure—
Ghent, 160 bgs.

Painters' Colours—
Amsterdam, 2 cks.
Antwerp, 1
Boulogne, 13 5 cs. 3 pks.
Calais, 5

Pitch—
Antwerp, 450 t.

GRIMSBY.

Week ending November 5th.

Alkali—
Dieppe 4 cs.

Caoutchouc—
Malmo, 1 blk.

Chemicals *(otherwise undescribed)*
Dieppe, 8 cs.
Malmo, 15

Coal Products *(otherwise undes.)—*
Dieppe, 87 cks.
Hamburg, 6 pks.

Colours—
Malmo, 11 cks.
Port au Prince, 2

Dyestuffs *(otherwise undescribed)*
Dieppe, 1 cs.

Painters' Colours—
Antwerp, 1 cs.
Dieppe, 2
Hamburg, 2 cks.

PRICES CURRENT.

WEDNESDAY, Nov. 16, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vai

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	2	6
,, ,, (grey) Hull .. .. ,,	10	1	3
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	2 /-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8½
,, 50/90 ,, ... ,,	0	0	8½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1½
Copper .. .. per ton	56	11	3
,, Sulphate .. .. ,,	18	0	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	27	10	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	10	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0

	£	s.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7
,, ,, (grey) (ex ship) .. .. ,,	7	17
Magnesium (ribbon and wire) .. .. per oz.	0	2
,, Chloride (ex ship) .. .. per ton	2	10
,, Carbonate .. .. per cwt.	1	17
,, Calcined Magnesia .. .. per ton	9	10
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12
Manganese, Sulphate .. .. ,,	17	0
,, Borate .. .. per cwt.	2	2
,, Ore, 70% .. .. per ton	3	10
Methylated Spirit, 61° O.P .. .. per gallon	0	2
Naphtha (Wood), Solvent .. .. ,,	0	2
,, ,, Miscible, 60° O.P. .. .. ,,	0	3
Oils:—		
Cotton-seed .. .. per ton	15	15
Linseed .. .. ,,	18	10
Stearine .. .. ,,	25	0
Phosphorus (Yellow) .. .. per lb.	0	1
,, (red) .. .. ,,	0	2
Potassium Bichromate .. .. nett ,,	0	0
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0
,, Chlorate .. .. per lb.	0	0
,, Cyanide, 98 % .. .. ,,	0	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	5
,, ,, ,, 75/80 % .. .. ,,	17	15
,, Potash Hydrate Liquid 50 % .. .. .. ,,	10	15
,, Nitrate (refined) .. .. ,,	19	15
,, Permanganate .. .. per cwt.	2	15
,, Prussiate Yellow .. .. per lb.	0	0
,, Sulphate, 90 % (ex ship) .. .. per ton	9	15
,, Muriate, 80 % ,, ... ,,	8	15
Silver (metal) .. .. per oz.	0	2
Sodium (metal) .. .. per lb.	0	2
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15
,, ,, (Caustic Soda-ash) 48 % .. .. ,, ,, (f.o.r. w'ks.)	4	5
,, ,, (Carb. Soda-ash) 48 % .. .. ,, ,, (f.o.r. w'ks.)	4	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	7
,, Acetate (ex-ship) .. .. ,,	12	5
,, Arseniate, 45 % .. .. ,,	13	0
,, Chlorate .. .. per lb.	0	0
,, Borate (Borax) .. .. nett per ton	14	10
,, Bichromate .. .. ,, per lb.	0	0
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	15
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	10
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10
,, Bicarbonate .. .. ,,	6	10
,, Hyposulphite .. .. ,,	5	5
,, Manganate, 25 % .. .. ,,	15	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7
,, Nitrite, 98 % .. .. per ton	25	0
,, Phosphate .. .. ,,	10	0
,, Prussiate .. .. per lb.	0	0
,, Silicate (glass) .. .. per ton	4	10
,, ,, (liquid, 100° Tw.) .. .. ,,	3	7
,, Stannate, 40 % .. .. per cwt.	2	15
,, Sulphate (Salt-cake) .. .. per ton	1	6
,, ,, (Glauber's Salts .. .. ,,	1	7
,, Sulphide .. .. ,,	7	5
,, Sulphite .. .. ,,	4	15
Strontium Hydrate, 100 % .. .. ,,	10	15
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0
,, Barium, 95 % .. .. ,,	0	0
,, Potassium .. .. ,,	0	0
Sulphur (Flowers) .. .. per ton	7	7
,, (Roll Brimstone) .. .. ,,	6	3
,, Brimstone: Best quality .. .. ,,	4	12
Superphosphate of Lime (26 %) .. .. ,,	2	10
Tallow .. .. ,,	23	10
Tin Crystals .. .. per lb.	0	0
,, English Ingots .. .. per ton	84	10
Zinc (Spelter) .. .. ,,	24	10
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0
,, Sulphate, Crystal .. .. ,,	6	7

THE

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AND

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nications for the Editor, if intended for insertion in the eek's issue, should reach the office not later than **Tuesday** g.

s, reports, and correspondence on all matters of interest to ical and allied industries, home and foreign, are solicited. dents should condense their matter as much as possible, ne side only of the paper, and in all cases give their names esses, not necessarily for publication. Sketches should be eparate sheets.

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CURRENT TOPICS.

NITRATE SHAREHOLDERS AND LITIGATION.

IT is pretty well a matter of common knowledge that the recently-heard appeal in the action of the Lagunas Nitrate Company against the syndicate of the same name drew from Mr. Justice Romer some caustic remarks concerning the amount of money which had been expended in procuring evidence, and the lavishness of the scale of costs generally, and that, although the case went against the Company, an appeal has been lodged against the decision of that learned Judge.

In addition to this, litigation has been in progress between Messrs. W. and J. Lockett and the Company ever since 1896, all of which means more expense. This sort of procedure may have been all very well in the days when nitrate producers thought they had discovered a veritable El Dorado, but in the present times of over-production and short prices people keep a more critical eye upon the doings of nitrate companies in which they are financially interested. Consequently, we have often asked ourselves during the last few weeks—What are the shareholders doing? Have they nothing to say, and where do they come in?

This week has brought an answer to our conjectures, which seems to indicate that the shareholders will come in very shortly—and on the warpath. One of them has come to the conclusion that shareholders at such crises are like a flock of sheep without a leader, and this particular individua having determined to abandon the trustful simplicity of the acquiescing ewe for the inquisitive activity of the aggressive ram, incites the rest of the shareholders to join him in his "butting" campaign.

He certainly opens his exhortation with a very pertinent inquiry concerning the £36,000. which was to be paid as a dividend, but which has not been forthcoming as yet, and not unnaturally is anxious to know if "It's waiting there! still waiting there for me."

There is reason also in the request that the shareholders be informed how much money has been expended on the Company's own costs in the litigation it has been engaged in. Detailed particulars would be acceptable of (1) the amount paid by the Company to the directors who went to Chili to attend the commission to take evidence; (2) cost of such commission; (3) the payments made to witnesses who came over to England; but we fear the endeavours to elicit this information will be as fruitful in effect as tilting at a windmill with a rush.

PISTOL EATS THE LEEK.

Last week we referred to the renewed efforts of the low-flash partisans to revive trade opposition to the extended use of safe oil in lamps. Will they kindly explain away the following facts while they are on the "spout?"

Much has been heard about the rise in the price of petroleum, which must inevitably result if the Government

standard of safety be raised from 73° F. to 100° F. During the last six weeks petroleum has certainly advanced in price. We expected it; and said so long before the Petroleum Committee issued their report, advocating a standard of 100° F.

No doubt much capital will be made out of this recent rise by attributing it directly to the issue of a report favouring a higher standard of safety. With all the pomposity of the I-told-you.so vein, representations will doubtless soon be made to the effect that if even a suggested standard of 100° F. was able to advance prices (and check retailers' sales), how much more would the actual legislation of this standard advance prices and hamper the retailer?

But, like Brother Gilbert in the "Pair of Spectacles," we know these specious arguments. They come—not from Sheffield—but the S.O. clique.

Instead of romancing, however, they must now justify their oft-predicted rise in price in the face of the fact that to-day safe, high-test oil is cheaper than the lowest grade of lamp oil they sell—their "poor man's light." Well! it once was, certainly, but it will soon be the "light of other days." The undertaker's bill was too high—and the flash-point too low.

In February last, we instanced how competition had been instrumental in affording the public a water-white oil, flashing at 103° F. (Abel test), at a cost of only *one farthing* per gallon *more* than the price charged for the dangerous oils of the low-flash type.

But this very week it has come to pass that this safe oil is now being freely offered for sale at a price *fifty per cent. cheaper* than even "Royal Daylight" itself. How can the advance in petroleum be attributed to the proposed raising of the standard of safety now, since oil flashing at 103° F. is cheaper than that which flashes at 76° F.?

Will the members of Parliament please note this fact, and compare it with the prophecies in the Blue Book evidence, which is to their hand? In five minutes they will learn more of the true-inwardness of the low-flash party's policy than most of their colleagues have learned in three years.

"Sanitas" Embrocation.—The Sanitas Company, Limited, of Bethnal Green, London, E., have sent us a sample of their "Sanitas" Embrocation. It seems to give excellent results in the treatment of sprains and rheumatics, and for general veterinary purposes. It certainly is pleasant in the application, and should be very popular as a "rub" for athletes.

Society of Chemical Industry: *Nottingham Section.*—The second meeting of the session will be held on Wednesday, November 30th, at the Midland Hotel, Derby, at 7 p.m., when the following paper will be read:—"Notes on the Arachidic and Lignoceric Acids of Earthnut Oil and their estimation," by L. Archbutt, F.I.C. A convenient train leaves Nottingham (Midland) at 6-12, arriving at Derby 6-42, and returning from Derby at 9-10.

Derbyshire Water for Leicester.—The Leicester Town Council, at a large and protracted special meeting on Tuesday evening, unanimously approved of the scheme for bringing the water of the Upper Derwent and the Ashop a distance of 66 miles to Leicester at a cost of four and a quarter millions sterling. The scheme drains a water-shed of 31,000 acres yielding over 50 million gallons daily. Thirty million gallons will be impounded by six reservoirs with an aggregate water area of 1,000 acres, passed through fifteen filter beds, and conveyed through Chatsworth, Matlock, Ambergate, Belper, and Derby to large distributing reservoirs at Leicester. Mr. Middleton and Mr. Deacon, engineers, have endorsed the scheme, and Sir Edward Frankland, Dr. Luff (of London), and Dr. Newman, bacteriological specialist, of King's College, have characterised the water as about the purest and best in England, and superior to Welsh water. It is estimated that the supply will last Leicester half a century, and the first instalment of the works, costing over a million and a half, will be commenced when Parliamentary sanction is obtained. The Corporations of Sheffield and Derby are also proposing to acquire the water, but the Chairman of the Leicester Committee expressed his firm conviction that Leicester and Derby would agree to form a joint board to *utilise* the entire water before reaching the Committee Room at Westminster.

Legal Intelligence.

CHANCERY OF LANCASHIRE.

MANCHESTER SITTINGS.

Before Vice Chancellor Hall, Q.C.

RIVER POLLUTION BY THE LANCASTER CORPORATION.

ORMROD V. THE CORPORATION OF LANCASTER.

Mr. Cripps, Q.C., and Mr. Attkins appeared for the defendants in this case, in support of a motion for the reduction of the sum of £2,595. awarded by the Registrar to the plaintiff, Captain Ormrod, of Wyresdale, near Lancaster, as damages sustained by him in consequence of the defendants' pollution of the river Wyre, which runs through his property, by discharging mud from their Abbeystead reservoir into the river. Mr. Maberly and Mr. Grant appeared for the plaintiff.—In opening the case Mr. Cripps explained that the plaintiff brought an action against the defendants in respect of the pollution complained of, and the matter was referred to the Registrar to assess the damages to be paid to the plaintiff. The plaintiff carried in a claim for £5,304. 4s. 6d., and the inquiry before the Registrar lasted thirteen days, and the Registrar assessed the total damages at £2,595. Of that amount £985. was given in respect of damage to the reservoir of the plaintiff's Cleveley Mill, £100. as compensation for interference with the working of the Cleveley Mill, £1,400. for the restocking of the river with fish, £105. for loss of pleasure in fishing, and £5. for the costs of an inspection. The principle upon which the compensation must be assessed was, he submitted, quite clear, and the measure of damage was not the cost of reinstating the property in its previous condition, but the damage which the plaintiff had sustained. With regard to the compensation awarded in respect of the Cleveley Mill, the evidence showed that the fee-simple value of the mill was £1,000. Since the case was heard the mill, which was a grist mill, had been dismantled. Undoubtedly the effect of the mud getting into the mill reservoir was to diminish the water power, and so depreciate the value of the mill. But the extent of the depreciation was very small, because the working capacity of the mill was only slightly affected, and he contended that the sum of £985. awarded by the Registrar, practically the fee-simple value of the mill, was very excessive. The Registrar had evidently based the figure awarded upon the cost of cleaning out the reservoir, and in so doing he had acted upon a wrong principle, as he had gone on the principle of reinstatement.—The Vice Chancellor, after consulting with the Registrar, said the Registrar informed him that he had not acted upon the principle of reinstatement in making his award, but he thought the damage was rather intentional, and the compensation ought to be on a generous scale. The Vice-Chancellor also pointed out that Captain Ormrod was only life tenant of the Wyresdale property, and asked what had been done with regard to the injury to the interests of the remainder man.—Mr. Maberly said it had been agreed that Captain Ormrod should represent the whole property, and the inquiry before the Registrar had proceeded on that footing. If necessary, the trustees could be joined to represent the interests in remainder.—Mr. Cripps, continuing his speech, submitted that the £985. awarded by the Registar in respect to the damage to the Cleveley Mill reservoir ought to be reduced to £500. at the outside. The further sum of £100. given for interference with the working of the mill ought, he contended, to be struck out altogether. Coming to the damage in respect to fishing rights, he was not, he said, instructed to raise any objection to the award of £105 for the loss of the pleasure of fishing. But the Registrar had, he argued, gone on a wrong principle in giving a sum of £1,400. for restocking the river with fish. The evidence called for the plaintiff showed that the sea-trout would only be partially destroyed, though the brown trout were said to have been destroyed altogether. The defendants had, however, netted a portion of the river, and taken 48 fish, which was admitted to be a large number, and the fish taken largely consisted of brown trout, thus proving that the brown trout had not by any means been altogether destroyed. The river would have fully restocked itself naturally in five years, and, taking the letting value of the fishing even as high as £100. a year, he submitted that £250. would be ample compensation on this head.—Mr. Maberly, in opposing the motion on behalf of the plaintiff, said it was important to bear in mind that the damage which had been done was the result of the defendants' neglect of obligations laid upon them by Acts of Parliament. There was ample material to justify the finding of the Registrar. With regard to the Cleveley Mill, the pollution of the river had reduced the storage capacity of the reservoir by 75 per cent., and practically destroyed the mill as a mill. The mill had previously been let at a rental of £110. a year, and its fee-simple value was therefore far in excess of the sum mentioned by the other side. As to the damage to the fishing rights, it ought to be taken into account that the plaintiff did not simply use the river for sporting purposes, but had set up an artificial fish hatchery and carried on a considerable business, sending fish to various parts of the United Kingdom. The natural restocking of the river with fish would take time. The Registrar will deliver judgment on Monday week.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Lining Casks internally with Paraffin Wax. E. H. Churchill. 23,445. November 8.

Electric Calcium Carbide Furnaces. J. Bastick. 23,481. November 8.

Ammonia from Vegetable Waste, etc. A. Wenck and E. R. Besemfelder. 23,542. November 8.

Extracting Fat from Wool. C. Gruene. 23,557. November 8.

Using Precipitated Sewage Sludge. W. R. Hutton junr. 23,562. Nov. 9.

Separating Clear Solutions from Precipitated Matters. A. James. 23,687. November 10.

Drying Viscous Substances. C. Martini. 23,688. November 10.

Extracting Metals from Ores. J. C. Montgomerie. 23,697. November 10.

Manufacture of White Lead. H. Davison. 23,703 November 10.

Improvements in Coke Ovens. N. Ostert. 23,796. November 11.

Improved Soap Compound. D. Gray, junr. 23,806. November 11.

Bleaching Soap. W. L. and W. Gadd. 23,848. November 12.

Obtaining Pure Silicic and Fluo-silicic Acids. S. Douglas. 23,876. November 12.

Manufacture of Sulphuric Acid and Apparatus therefor. E. G. Scott. 23,849. November 12.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improved Means Applicable for Use in the Electrolysis of Salts. J. Hargreaves, Farnworth-in-Widnes Lancs. Eng. Pat. 17,161. July 20, 1897.

The chief features of the cell are the construction of the diaphragm-electrode and the grid-like anode, which is fitted in the cell in an improved manner, so as to support the salt to be decomposed. The diaphragm-electrode is formed by stretching a wire cloth in a horizontal position and covering one side with a porous material like clay or paper pulp. On this is placed a thin layer of some dense material, such as Portland cement, a final layer of some porous substance being caused to adhere to its surface.

In practice a suitable compound was found to be composed of asbestos, with lime, indurated by saturation with a solution of sodium silicate. When the diaphragms are to be used in a horizontal position, the top covering may be composed of loose asbestos pulp, or silicate of magnesia. A deposit of metallic oxide is formed upon the surface of the cathode before using, so as to facilitate the escape of the products of the electrolysis. There are six figures, illustrating vertical and horizontal cells (which are described in detail) and a special form of brine saturator.

Improvements in Apparatus for Treating and Cooling Heated Liquid Fats and Oils with Air. C. G. Hepburn, 169, King-street, Sydney, N.S.W. Eng. Pat. 18,730. September 1, 1898.

In general appearance the apparatus resembles a centrifugal. The oil, etc., is run into a central basket, which acts as a filter. The sides of the outer casing are louvred. When the basket is whirled the oil is sprayed against the louvres, and also by its rapid rotation induces a current of air over the thin layers of oil, etc., on the louvre boards. There are 22 figures.

Improvements in the Manufacture of Acetic Acid. E. G. Scott, 67, Lord-street, Liverpool. Eng. Pat. 223. January 4, 1898.

The still is not unlike that illustrated in the *Journal*, No 504, p. 58, except that it is shallower. It is steam-jacketted and fitted with an agitator, but has the additional accessories necessary for working under a vacuum. After the acetate has been decomposed by mineral acid, and the contents are heated to distill over the acetic acid, the vacuum is still maintained. The whole process is thus conducted out of contact with the air, and the loss lessened. There is one figure.

Improvements in Alloys of Titanium and Process for Producing the same. A. J. Rossi, 134, West 83rd-street, J. McNaughton, 1, West 30th-street, and W. D. Edmonds, 31-33, Nassau-street, all of New York, U.S.A. Eng. Pat. 28,127. August 23, 1898.

The claim is for the economical production of a ferro-titanium alloy as free from carbon as possible, which shall contain considerable amounts of titanium—say not less than 5%. Four methods of production are described in full, one of which makes use of titanic slags. The following, however, gives a sufficiently general idea of the methods employed:—Sixteen parts of an ilmenite ore, containing from 35 to 60% of iron, and 10, 20, or even 48% titanic acid are mixed with 5 parts of charcoal and 100 of cast iron (95%). This mixture is heated in a graphite crucible to a temperature not lower than 3,500° F., thus producing an alloy containing 90% iron, 8% titanium, and 2% carbon. By preference the heating is done in an electric furnace, and a suitable form is illustrated.

An Improved Process of Refining Oil. W. A. Smith, 705, Genesee-avenue, Cleveland, Ohio, U.S.A. Eng. Pat. 30,662. December 30, 1897.

The method described is intended more particularly for the treatment of sulphurous crude petroleums or distillates. The oil or distillate is run into an ordinary still, and one gallon of spirits of turpentine added for every 500 gallons of oil. When neutral or heavy distillates are used, rosin may be substituted for turpentine, with advantage, in which case three pounds of rosin are added to every 1,100 gallons of distillate. The whole is then heated to a temperature just below the distillation point of the mixture. The liquid is next cooled, pumped into agitators and treated in the usual way, as if refining Pennsylvanian oil. The claim covers terpenes and their oxygen derivatives; in fact all exudations from trees of the *conifera* family.

IMPORTS AND EXPORTS FOR OCTOBER.

THE Board of Trade returns for last month were fairly satisfactory. The *imports* of oils were less, but nitrate of soda shows an increase. In the *exports* there are decreases in most articles except salt. Chemical manures, though lower in quantity, were higher in value.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

ARTICLES.	Quantities. 1897.	1898.
Margarine ..... Cwt.	68,281	80,498
Copper Ore and Regulus..... Tons	19,280	13,687
Pyrites..... ,,	53,330	44,361
Tin ..... Cwt.	58,372	33,716
Alkali ..... ,,	14,416	23,424
Brimstone ..... ,,	34,093	33,324
Borax ..... ,,	—	46
Dyes, Coal Tar ..... £.	59,296	57,418
Saltpetre ..... Cwt.	15,079	19,631
Petroleum ..... Gall.	19,795,715	16,597,237
Turpentine ..... Cwt.	14,552	34,207
Guano ..... Tons.	1,312	5,448
Nitrate of Soda ..... ,,	3,245	6,588
Paraffin Wax..... Cwt.	67,483	79,693
Rosin ..... ,,	56,403	68,014
Tallow and Stearine..... ,,	169,543	233,754
Tar ..... Barrels	3,093	17,145
Oil Seed Cake .....Tons.	25,275	23,353
Wood Pulp..... ,,	33,474	34,114

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

ARTICLES.	Quantities. 1897.	1898.
Alkali ..... Cwt.	483,891	375,239
Cement .....Tons.	36,512	31,032
Coal and Coke ..... ,,	3,223,926	3,299,177
Copper, all kinds ..... Cwt.	102,202	98,794
Iron and Steel .....Tons.	340,915	261,340
Chemical Manures ..... ,,	33,431	32,154
Oils, seed ..... ,,	4,287	3,287
Salt ..... ,,	58,184	59,360

THE BRITISH CO_2 COMPANY, LIMITED.—In a debenture holders' action, Wallace *v.* British CO_2 Company, Limited, before Mr. Justice Kekewich, this week, Mr. Peterson applied for the appointment of a receiver and manager.—Counsel said the plaintiff held all the debentures in the company, which had a charge on all the undertaking. The principal was not due; but there was jeopardy in that creditors were threatening to take proceedings against the company. This company worked a secret process, known only to the plaintiff director and the manager; and it was proposed, with the consent of the company, that the plaintiff director should be appointed receiver and manager by the court without security. Mr. Hodgson appeared for the company, and consented. His lordship made the appointment asked for.

Official Memoranda.

(From the Board of Trade Journal.)

CUSTOMS TARIFF OF JAPAN.

The following is a statement of the Rates of Import Duties established by the recent General Tariff Law of Japan, with additional particulars showing the Conventional Rates of Duty on various Articles as fixed by Treaties between Japan and other Powers.

Classification of Articles.	Rates of Duty established by General Tariff. *Ad valorem.*	Conventional Rates fixed by Treaties between Japan and other Powers.
Salt, sea or rock—		
(*a*) Crude	... 10 %	
(*b*) Refined	... 15 ,,	
Acid, carbolic	... 10 ,,	
,, salicylic	... 10 ,,	G., 10 % *ad valorem.*
,, tartaric	... 10 ,,	
Alcohol	... 40 ,,	
Alum	... 10 ,,	
Bismuth, subnitrate of ...	... 10 ,,	,, ,,
Bleaching powder	... 10 ,,	
Borax (socii biboras)	... 10 ,,	
Cinchonine (muriate or sulphate of)	... 10 ,,	
Cinnabar	... 10 ,,	
Cutch and gambier	... 10 ,,	
Glycerine	... 10 ,,	
Gum Arabic, or acacia ...	... 10 ,,	
,, benzoin, or benzoinum ...	... 10 ,,	
Lead, acetate, or sugar of ...	... 10 ,,	
Manganese, black oxide of (manganesii oxidum nigrum) ...	... 10 ,,	
Phosphorus, amorphous ...	... 10 ,,	,, ,,
Potash, bromide of (potasii bromidum)	10 ,,	
,, chlorate of (potasii chloras)	... 10 ,,	,, ,,
,, iodide of (potasii iodidum)	... 10 ,,	
Rosin	... 10 ,,	
Saltpetre (potasii nitras ...	... 10 ,,	U K., G., 100 catties, 0·490 yen (equivalent of 5 % *ad valorem*).
Shellac	... 10 ,,	
Soda ash	... 10 ,,	
,, bicarbonate of	... 10 ,,	
,, caustic	... 10 ,,	
,, crystals, washing soda ...	... 10 ,,	
,, salicylate of	... 10 ,,	
Alizarine dyes	... 10 ,,	G., 10 % *ad valorem.*
Aniline dyes	... 10 ,,	G , F., 10 % *ad valorem.*
Blue, mineral (dry or liquid) ...	... 10 ,,	
Carmine	... 10 ,,	
Cobalt, oxide of	... 10 ,,	
Cochineal	... 10 ,,	
Emerald green	... 10 ,,	
Galls of all kinds	... 10 ,,	
Gamboge	... 10 ,,	
Gold, silver, or platinum, liquid	... 15 ,,	
Indigo, dry	... 10 ,,	U.K., 100 catties, 12·953 yen (equivalent of 10 % *ad valorem*).
Indigo, liquid	... 10 ,,	
,, extract and indigo carmine	... 10 ,,	
Lead (all colours)	... 10 ,,	
Logwood, chips	... 10 ,,	
,, extract of	... 10 ,,	G , F., 10 % *ad valorem.*
Paint in oil	... 10 ,,	U.K , G., 100 catties, 1·304 yen (equivalent of 10 % *ad valorem*).
Smalt	... 10 ,,	
Turmeric	... 10 ,,	
Ultramarine	... 10 ,,	
Verdigris	... 10 ,,	
Vermilion	... 10 ,,	
White zinc	... 10 ,,	
All other dyes, colours, and paints	... 10 ,,	
Bones, animal	... 5 ,,	
Candles	... 15 ,,	F., 10 % *ad valorem.*
Gasoline	... 10 ,,	
Oil, castor	... 10 ,,	
,, c coanut	... 10 ,,	
,, ground nut	... 10 ,,	
,, kerosene	... 10 ,,	
,, linseed	... 10 ,,	
Oil olive	... 10 %	
,, palm	... 10 ,,	
,, paraffin	... 10 ,,	U.K , G., 10 % *ad valorem.*
Spirit of turpentine	... 10 ,,	
Wax, Chinese white	... 10 ,,	
,, paraffin	... 10 ,,	U.K., G , 100 catties 0·544 yen (= 5 % *ad*

Duty Free Articles.—Animal bone ashes. Books, printed; cluding pamphlets, copy books, journals and periodicals. Guano cake, in lump or powdered.

Prohibited Articles.—Adulterated drugs, chemicals, medicines, fo and beverages considered injurious by laws, ordnances, and regulatic

REDUCTION OF DUTY ON ALCOHOL USED I MANUFACTURES.

A despatch has been received at the Foreign Office from H M. Minister at Brussels, transmitting copies of a Royal Decree, extending the relief from excise duty granted to alcohols utilised in the manufacture of fulminate of mercury, in the preparation of pharmaceutical products and in the manufacture of imitation leathers, from 64 francs to 90 francs per hectolitre of alcohol.

MINERAL PRODUCTION OF NEW ZEALAND.

The mineral production of New Zealand for the years ending 31st December, 1897 and 1896, is given in the annual statement of the Minister of Mines as follows :—

	1897.		1896.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Gold	251,645 oz.	980,204	263,694 oz.	1,041,428
Silver	183,892 ,,	20,872	94,307 ,,	10,589
Antimony Ore ..	10 tons	157	21 tons	450
Manganese Ore...	180 ,,	541	65 ,,	205
Mixed Minerals..	1,561 ,,	5,892	37 ,,	1,335
Coal ...	840,713 ,,	451,915	792,851 ,,	428,648
Kauri Gum ...	6,641 ,,	398,010	7,126 ,,	431,323

The decrease is in gold and kauri gum, silver and coal showing an increase. Although not yet of important dimensions the value of mixed minerals also shows a substantial increase. The total for 1896, though better than that for 1897, was in its turn below that for 1895 by £91,736, the value of gold alone being less by over £120,000

NOTES ON AMERICAN CHEMICAL TRADE.

THE Will Ridley farm, containing about 700 acres, near Mount Pleasant, Maury Country, Tennessee, has been purchased by S. and E. Studwick, of Richmond, Va., and John Carpenter, of Columbia, Tenn. It is estimated that there are between 150 and 300 acres of phosphate on the place, and the purchasers will proceed at once to open the mines, build a branch road and a £5,000. plant. Cheairs farm, near Spring Hill, has also been sold to S. W. Sweeny for £4,600., and the S. P. Harlan farm to Austin Harlan for £2,200, both being phosphate territory.

* * *

The Ducktown Copper, Sulphur and Iron Company, Polk County, Tenn., will soon re-open the East Tennessee copper mine, the most productive at Ducktown. It has not been in operation for several years. It will give employment to 700 men.

* * *

It is rumoured that Messrs. Bellamy and Burkhardt have found a market in Chicago for the Halleck Canon graphite, Albany Company, Wyoming, and that a force of men will be put to work at once It is yet a question whether the graphite will be hauled to Wheatland on the Cheyenne and Northern or to some point on the Union Pacific. There are numerous large seams of amorphous graphite in the canon.

* * *

The Carnegie Steel Company has broken ground for its universal plate mill, which is to cost over £150,000. It will be the largest of the mills now making up the Homestead Steel Works, with the exception of the armour plate works, and will employ 500 workmen.

The American Colour and Chemical Company, Bethlehem, N. J., has been incorporated with a capital of £20,000. to manufacture chemical products, and will begin business with a capital of £5,000. The directors and stockholders are Louis I. Waldman, Emanuel von Salis, William Besser, Martin E. Waldstein, and Frederick E. Atteaux.

* * *

The present month's shipments of high grade Florida rock promise to exceed those of October. The movement of phosphate from the port of Savannah in October amounted to 8,068 tons, principally to Germany. Other phosphates are meeting with a fairly good demand, and charters noted are a bark of 992 tons, from Tampa to Baltimore, at $1 80; a schooner of 1,112 tons, from the same port to Baltimore, at $1.80 and to Carteret, N. J., at $1.90; a schooner, 979 tons, from Charlotte Harbour to Baltimore, at private terms; another of 1,017 tons, from the Gulf to the same port, at private terms, and one of 893 tons, from Port Royal to Baltimore, also at private terms. Imports at New York included 2,500 bags of phosphates from Antwerp, Belgium. The shipments of Tebessa phosphates from Soukarras from January 1st to September 15th amounted to 154,270 metric tons, against 141,710 tons in 1897, and 114,160 tons in 1896. The largest shipments were made by the Jacobsen Company, amounting to 70,330 metric tons.

EXTRACTING TANNIN FROM RAW MATERIALS.

THE chemists, V. Schroeder and A. Bartel, have recently instituted experiments to ascertain the conditions under which it is possible to extract the greatest quantity of active tannin from the usual tannin substances.

Their experiments were conducted in the following manner: A quantity of 10 to 20 grams of the finely pulverised dry substance was for two hours extracted by boiling in one litre water in an apparatus. After filtering and expressing the quantity was extracted another time, continuing the boiling for 48 hours; it was after this boiled a third time for 48 hours. One litre water was used each time.

The experimenters concluded from the first experiments that if a sufficient quantity of water is employed, only a few hours of boiling are required to extract the largest part of the tannin; the second and third extractions only draw traces of tannin from the residue. A prolonged boil makes the originally insoluble extract stuffs soluble, and the longer the boiling is continued the more the water becomes charged with non-tannin ingredients. In the manufacture of tannin extracts, therefore, it is not advisable to push extraction too far, even though a little more tannin may be obtained, as the quality of the whole product is deteriorated by the non-tannin constituents. Experience will teach how long boiling should be continued in order to extract the greatest possible quantity. Nor should too much water be employed to avoid a number of non-tannin substances from being extracted.

These results were confirmed by the second experiments As previously stated, the boiling was repeated twice, each time for two hours. Of valonia, 7 grains were used; of myrabolams, sumac and quebracho, 10 grams; of oak bark and hemlock bark, 20 grams.

When comparing the analysis of the extracts of the first series (extraction lasting altogether for 98 hours), with those of the extracts of the second series (extractions lasting six hours), the following totals will be found. The quantity of non-tannin substances found in the solution after two hours is quoted at 100:—

	After 6 hrs.		After 98 hrs.
Oak Bark	109	..	243
Hemlock bark	112	..	228
Valonea	102	..	206
Myrobolans	101	..	136
Sumac	103	..	165
Quebracho	103	..	268
Oak Wood	105	..	420

It will be seen that the greatest quantity of the tannin extracts analysed became charged by a long-continued boiling with more than double the quantity of soluble non-tannin constituents, while the quantity of the dissolved tannin almost remained the same. A boiling continued for six hours may, therefore, be regarded as standard if the material is sufficiently comminuted to yield the really useful substance, whereby an extract is obtained containing a small percentage only of non-tannin constituents.—*Dingler's Polyt. Journal.*

WHITE LEAD COMPANY (LIMITED).—An extraordinary general meeting was held on Wednesday at the office, Great St. Helens, Sir H. W. Tyler presiding, when, on the motion of the chairman, seconded by Lieutenant-General Sir J. Stokes, the resolution passed at the recent meeting for the voluntary winding up of the company and the appointment of Mr. E. A. Foster as liquidator was confirmed.

Agricultural Notes.

FERTILISER FIELD EXPERIMENTS.

On Saturday last Mr. T. B. Wood, of the Cambridge and Counties Agricultural Education Scheme, in his annual report on field experiments, said:—Last year they found very little difference in the value for seed purposes between sweated and unsweated barley. This year they repeated the experiment with seed which was not well harvested, with the result that the sweated seed produced 31¼ bushels per acre, and the unsweated 29 bushels. As to the quality of the samples, there was a slight advantage in favour of the samples grown from the sweated seed. The idea of another experiment, designed to last four years, was to find out whether it was most profitable to apply a heavy dressing of dung or artificials to a root crop and to grow the succeeding crops in the residue of the heavy dressing, or whether it was better to give a small dressing to the root crop and apply year by year afterwards a small dressing. At present they had reached their second crop, and so they could not finally report on the experiment. The plot which had paid the best was the one where they grew 12 tons 12 cwt. of swedes. With 3 cwt. of superphosphates they had fed that quantity of swedes off the land and obtained 46½ bushels of barley. At present the small dressings applied every year had paid better than the large dressings which were intended to last four years. Some of the manures had had the enormous effect of rather more than doubling the crops in the case of hay. The mixture of 2 cwt. of nitrate of soda and 2 cwt. of potash, costing 33s. per acre, had given an increase of nearly 28 cwt. of hay. Superphosphate did not increase the yield; it seemed to decrease it. Comparing the no-manure plot with the plot with nitrate of soda only, they had an increase of nearly 13 cwt. at a cost of 17s. Potash by itself produced hardly any increase at all. As to the potato experiments, the manure containing nitrate produced the largest increase. It produced 11 tons per acre, an increase of 1 ton 12 cwt., at a cost of 22s. The greatest gain was due to spraying, which cost 7s. 6d. per acre. He did not remember seeing a single diseased potato from the plots that were sprayed. As to the mangolds, in every case manure had produced a very large increase. Salt and potash had not paid, but nitrate of soda and superphosphate had paid in both cases. With regard to hemp, they tried to see whether it would grow as well on the highlands as on the lowlands. The results showed satisfactorily that it would only grow on fenlands, the yield per acre being double that on the highlands. Five hundredweight of superphosphates seemed to be the best manure they could use. Imported seed gave far better results than the seed which had been grown in England for some time

THE VALUE OF STREET SWEEPINGS.

An investigation of much practical interest has been carried out by the United States Department of Agriculture concerning the fertilising or manurial value of street sweepings. Letters of inquiry were sent to the officials in charge of street-cleaning departments in the 354 cities and towns of the United States having 10,000 or more inhabitants. As the result, more or less complete *data* relating to the disposal of the street sweepings of 204 cities and towns were obtained. It appears that 60 of these succeed in disposing of some portion of their street sweepings for agricultural purposes; 74 make no attempt to turn to account the fertilising value of the material, though some part of the latter is used for filling in low land, for reclaiming marsh land, etc.; the remaining 70 dump the material in streams or other bodies of water, or on land, without any systematic attempt at utilisation. In general terms it may be said that cities representing one-fourth of the entire urban population of the country make an effort to utilise the fertilising value of some portion of their street sweepings. Reasons are assigned for estimating the total quantity of street sweepings annually collected throughout the country at not far short of 3,000,000 tons, this being based upon a calculated average of 169 tons per 1,000 inhabitants per annum.

The fertilising value of the sweepings varies greatly with the nature of the pavements, being practically nothing in the case of material off macadamised roads, and approaching that of good stable manure in the case of material collected on the hand-swept and well-paved streets of crowded cities. The regulations in different cities as to the nature of the substances which may be thrown into the alleys and streets, and thus find their way into the material collected by the sweepers, vary so widely that there is necessarily a corresponding difference in the cost of sorting and preparing the material for spreading on the land. It is believed that the rapidly-increasing sentiment in favour of the careful separation and systematic utilisation of all kinds of city waste will tend to remove this difficulty and thus increase the value of sweepings, particularly of such as are collected in alleys, where the percentage of miscellaneous rubbish is now often very great. In autumn the quantity and, in many cases, the quality of the street sweepings are much enhanced by the falling leaves. There appears to be a dearth of recent literature on the subject of the fertilising value of the material under

notice. In 1892 the *Landwirtschaftliche Presse* published an analysis of sweepings from the asphalt-paved streets of Berlin, which yielded the following percentages :—

Moisture	38·89	Phosphorus pentoxide	0·452
Ash	37·67	Potash	0 370
Organic matter	22·44	Lime	1·891
Total nitrogen	0·479	Magnesia	0·347
Ammoniacal nitrogen .	0·004		

A sample representing the accumulations for four weeks of the sweepings from a street in Trenton, New Jersey, in 1895, yielded on analysis 0·18 per cent. of nitrogen, 0·3 per cent. of phosphorus pentoxide, and 0·19 per cent. of potash ; this material was valued at 90c. per ton. From the tabulated results of analyses of 18 samples of sweepings obtained from the streets of Washington City we learn that the percentages of the substances named ranged between the following extremes : —Organic matter, 35·5 and 10·2 ; nitrogen, 1·18 and 0·17 ; phosphorus pentoxide, 0·16 and 0·1 ; potash, 0·5 and 0·08.

An effort was made to supplement the analytical *data* with the results of practical tests made by farmers to determine the value of street sweepings as a source of plant food for field and garden crops, and as a source of the humus which is indispensable to the good mechanical condition of many soils. Evidence was forthcoming to show that well-selected and judiciously used street sweepings possess considerable manurial value. Out of 16 quoted letters, only four of which report unfavourable results, we may briefly notice two or three. A farmer who uses the sweepings from Atlanta, Georgia, finds one ton of them to be about equal to half a ton of mixed stable manure (two-thirds cow, one-third horse) ; he has used the sweepings for three years for maize, wheat, oats, rye, and potatoes, broadcasting about 20 tons per acre, and his lands have greatly improved. At Norfolk, Virginia, a grower has been using street sweepings for several years, and with much profit, on spinach, cabbage, kale, and potatoes ; he finds that their effect on the land is much more lasting than that of stable manure. At Pittsburg, Pennsylvania, street sweepings are used very largely in the parks, with excellent results ; the material is powerful and quick in its action, and gives a capital growth of grass, whilst its effect is more lasting than that of artificial manures. A Californian hop grower puts the street sweepings of Sacramento direct on the hop hills.

The exact monetary value of street sweepings is, of course, not easy to determine. Using the very conservative estimate of 10c. per lb. for the nitrogen, and disregarding the phosphoric acid and the potash, Mr. Ervin Ewell, the chemist who has prepared the bulletin, calculates that the samples analysed would range in value between $1·46 and 34c. per ton. The material, however, has its uses in addition to the fertilising value of the plant food it contains. Gardeners, for example, appreciate it on account of its improving the mechanical condition of stiff and badly aerated soils. Sixteen cities reported the prices at which street sweepings are sold to farmers, and these prices vary from 15c. to $2 per ton. It is hoped that the publication of this bulletin will result in improved methods for the collection of street sweepings, and in the extension of their use for maintaining the productiveness of the land.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for September. The total shipments were 87,999,604 gallons, compared with 87,413,316 gallons in 1897. The total for the nine months ending September, 1898, was 765,078,044 gallons, against 737,986,421 gallons in the same period of 1897. The details of the shipments are as follows :—

		Gallons.
CRUDE PETROLEUM.		
Total, September,	1898	8,475,237
,, ,,	1897	7,878,570
NAPHTHAS.		
Total, September,	1898	1,967,828
,, ,,	1897	2,474,757
ILLUMINATING.		
Total, September,	1898	70,114,013
,, ,,	1897	70,961,828
LUBRICATING AND PARAFFIN.		
Total, September,	1898	5,584,286
,, ,,	1897	4,896,709
RESIDUUM.		
Total, September,	1898	1,857,240
,, ,,	1897	1,201,452

Reports of Companies.

THE KELLNER-PARTINGTON PAPER-PULP COMPANY, LTD.

The ninth annual general meeting of the above company was held last week at the Accountants' Hall, King-street, Manchester, Mr. Edward Partington (chairman of the company) presiding. The report showed that the gross profits for the year amounted to £112,745. 15s. 5d., and there was a balance brought forward from the previous year of £5,562. 17s. 6d. The directors had appropriated for the purpose of depreciation on the various properties owned by the company the sum of £30,000. : written off from the licences, patent rights, and goodwill account £15,000. : paid an interim dividend of 6 per cent. in May last, £21,241. 14s. 2d. : and now recommended a dividend at the rate of 6½ per cent., which would absorb £23,011. 17s. 1d. The Chairman proposed the adoption of the report and balance-sheet, and said that amongst their properties were 1,200 acres of land in Norway in a developing district, which was increasing in value, and would be a permanent benefit to them.—Mr. Edward Platt seconded, and the resolution was carried.—Mr. Oswald Partington was re-elected a director, and Messrs. R. F. Miller and Co. were re-appointed auditors.

THE GERMAN INCANDESCENT GAS SHARE COMPANY, LIMITED.

At the ordinary general meeting of the German Incandescent Gas Share Company, Limited, Mr. H. Mosenthal said that from the balance brought forward (£8,776.) had to be deducted the dividend of 8 per cent. declared on November 4 last year, leaving a balance of £216. There was also the dividend of 60 per cent. declared by the German company, which was the sole source of revenue (£7,324.), against which the expenses had amounted to £637., leaving £6,902. The working of the Company depended upon that of the Deutsche Gasgluehlicht Aktien-Gesellschaft, Berlin, in whose shares the issued capital was invested, the price of the share of 1,000 marks now standing at 4 510 marks. That company had done thoroughly satisfactory business during the year, though, apart from the actual business done, the result was not so satisfactory in that the judgments given in the law suits, which were first in the company's favour, had been reversed on appeal, and lost by the company. The business had now, however, been placed on such a basis that the directors considered it to be independent of the patent, while during the year the patent account had been written down to the sum of 1 mark, or practically nothing. The German company had also carried forward a sum sufficient to pay 12 per cent. upon the capital. A dividend at the rate of 6 per cent. was declared.

SULPHIDE CORPORATION, LIMITED.

It is notified that during the period of four weeks from September 26 to October 24 15,389 tons of ore were milled at the Central Mine, yielding 2,950 tons of concentrates. At Cockle Creek, during the same period, 2,050 tons of concentrates, 231 tons of residues, and 117 tons of purchased ore were milled, yielding 1,300 tons of silver-lead bullion. Mining, milling, and smelting expenses, inclusive of railages, freights, and realisation charges, amounted to approximately £23,647., which is exclusive of London and general expenses The value of the product at present prices of metals is estimated at £31,790.

THE NORTHWICH SUBSIDENCE.

OWING to the subsidence of the London Road referred to in our last issue, coming to a standstill, Messrs. Taylor's offices and their caretaker's house were saved. They were four feet out of the perpendicular, but by the aid of timber baulks and hydraulic jacks they were restored to the vertical almost without the displacement of a single brick.

Mr. Bull, the surveyor to the Cheshire County Council, after examining the sunken road, gave orders for the cavity to be filled. The boats of the Salt Union and the neighbouring chemical works brought loads of cinders. In all 1,000 tons were used for filling in.

The extent of roadway which gave way entirely or which shows cracks and fissures was 180 feet long and 160 feet wide, and the greatest depth from the normal road level was 12 feet. The chasm proper is thirty yards across.

A heavy timber frame, 112 feet long and 36 feet wide, prepared by the direction of the County Surveyor, was laid on the London Road, and covered with cinders. It should effectually prevent sudden collapse. The chasm was completely filled and the road opened by Monday morning. The cost of the rough restoration is estimated at £300.

GOLD OUTPUT IN THE RAND.

ANOTHER RECORD.

THE output from the Witwatersrand district during the past month, as cabled by the Chamber of Mines of the South African Republic, amounts to 400,791 ozs., while from outside districts 22,426 ozs. are reported, a total of 423,217 ozs. This shows an increase of 14,715 ozs., as compared with the previous total. No comparison with the corresponding month of 1897 can be made.

	1895.	1896.	1897.	1898.
	oz.	oz.	oz.	oz.
January	177,463	148,178	209,832	336,577
February ...	169,295	167,018	211,000	321,238
March	184,945	173,952	232,067	347,643
April	186,323	176,707	235,698	353,243
May	194,580	195,008	248,305	365,016
June	200,941	193,640	251,529	365,091
July	199,453	203,873	242,479	382,006
August	203,573	213,418	259,603	398,285
September ..	194,764	202,561	262,150	408,502
October	192,652	199,889	274,175	423,217
November ..	195,218	201,113	297,124	—
December ..	178,428	206,517	310,712	—
Total ..	2,277,635	2,281,874	3,034,674	3,700,818

NATURAL SODA DEPOSITS IN AMERICA.

LARGE deposits of sulphate of soda in association with halite (rock salt), occur in the Verde Valley, a few miles south of old Camp Verde, Arizona, U S.A. They form large banks and hillocks, slightly discoloured by soil and dust. The mineral is quarried out in large blocks, and is sold to ranchers and stockmen for their cattle ranges. The salt occurs in crystalline blocks, very clear and pure, in the midst of the thenardite, and is not easily separated from it. Analysis shows that this mineral contains about 53 per cent. of sulphuric acid and 43 per cent. of soda. The mineral called "glauberite" occurs at this locality. The crystals are from half an inch to two inches or more in length.

The deposits of the thenardite and the associated minerals are of considerable magnitude, covering several acres in extent, and reach a thickness of some 50 or 60 feet or more. They appear as a series of rounded hills, with sides covered with a snow-white effervescence and a greenish coloured and yellow clay at the bottom and top, partially covering the saline beds from view.

Thenardite.—This salt constitutes the bulk of the deposits. It is a coarsely crystalline mass, so compact and firm that it can be broken out only by drilling and blasting powder. It varies in its purity. Some portions are more or less contaminated with a greenish coloured clay, but it is obtained also in large masses nearly colourless and transparent, with a slight yellowish tint, but seldom showing crystalline forms.

Mirabilite.—The hydrous sulphate of soda occurs in close association with the thenardite, and appears to penetrate its mass in veins, but may prove to be an overlying bed. It is this species which, by its rapid efflorescence when exposed to the air, covers the whole deposit with a white powder and a thick crust through which the quarrymen must cut before they reach the solid banks of the anhydrous sulphate.

Halite.—Rock salt in beautifully transparent masses is sparingly disseminated in portions of the great beds. These crystalline masses, so far as observed, do not exceed an inch or two in thickness, and no evidence of the existence of any separate workable beds could be seen. It is irregularly disseminated in the sulphate. Some masses exhibit beautiful blue tints of colour, like those seen in the salt of the Tyrol and of Stassfurt. Good fragments for optical and thermal experiments could be obtained.

Glauberite.—This anhydrous sulphate of lime and soda is an interesting associate of either species. It occurs chiefly near what appears to be the base of the deposits, in a compact green clay. It is in clear, transparent, colourless crystals, generally in thin rhombs, lozenge-shaped, with the plane angles of 80 and 100 degrees, and from half-an-inch to an inch or more broad and one-eighth to one-quarter of an inch in thickness. The prismatic planes are generally nearly obliterated, or are absent, through the great development of the semi-octahedral planes, 7, replacing the obtuse terminal edges. The terminal plane is chiefly developed, and this, with the broad planes replacing the obtuse edges, gives to some of the crystals the appearance of rheubehedrons of the minus series. The general habit of the crystals is similar to those from Westeregeln, near Stassfurt, described by Zepharevich, with the predominating pyramid—1. Traces of a pyramid on the acute edges have also been noted. There is evidence that the crystals vary greatly in size and in their habit in different parts of the deposits. They occur also in the midst of portions of the solid thenardite as inclusions, and in one instance a small crystal was found in the midst of a transparent mass of halite. Close inspection of the the transparent tabular crystals in the green clay reveals the presence of crystalline cavities with fluid inclusions made evident by the movement of small bubbles. When heated the decrepitation is violent.

Carbonate of Lime (Pseudomorphous).—Where the lower bed containing the bulk of the glauberite crops out at the surface and has become oxidised and dried the glauberite disappears and is replaced by carbonate of lime in an amorphous condition, but, having the exact form of the glauberite crystals, whose matrix they have filled. These pseudormorphous ones are firm, compact, and dense, but are without cleavage or interior crystalline structure. Colour, cream yellow. They weather out in great number, and show that the glauberite must occur in great variety of sizes and forms of aggregation, in some places in rosettes and in others in crystals two or three inches long.

Native Sodium Carbonate.—Extensive deposits of a native sodium carbonate in Northern Sonora, near to the Arizona line, are known to exist, and are under exploration by citizens of Tucson. In the month of February, 1898, an investigation was completed in the laboratory of the Arizona School of Mines of the "trona," or crude carbonate of soda, brought in from a deposit near the head of the Gulf of California, a detailed account of which was given in the *Journal*, No. 562, page 156.

THE DRY DISTILLATION PRODUCTS OF BRAN.

By W. F. Laycock.

AN interesting research has recently been conducted by Mr. W. F. Laycock, Ph.D., F.C.S., of Leeds, with a view to increasing our knowledge of the products which are obtained by the dry distillation of bran with lime. In the following we give a very brief summary of the research, which can be consulted in detail in the columns of the "Chemical News."

Twenty-two kilos of wheat bran mixed with 44 kilos of burnt lime were subjected to dry distillation in a large iron retort. The resulting distillate consisted of an aqueous solution A, measuring 9·6 litres, on the surface of which floated 420 grams of a black oil B. The aqueous solution A smelled of herring brine, and contained a considerable quantity of ammonia, chiefly as bicarbonate.

The oil B., after re-distilling (220 grams), was treated with dilute hydrochloric acid, and the pyridine bases, thus separated, were afterwards purified. The unchanged oil was freed from small amounts of ketones by shaking with sodium bisulphite solution. The residual oil consisted chiefly of a mixture of hydrocarbons and pyrrol homologues.

Summary of Results.

The following substances were separated from the aqueous distillate :—

A.

About 300 grms. of ammonia as chloride.
,, 20 ,, amine bases as salts (methylamine, ethylamine, and trimethylamine).
,, 26 ,, oil containing pyrrol and its homologues (and averaging 11 per cent. nitrogen).
,, 29 ,, ketones (methylpropyl ketone) and small quantities of ethyl alcohol.
Traces of furfurans, pyridine bases, and indoles.

The oil B yielded :—

About 10 grms. of pyridine bases (picoline, lutidine, collidine) and small quantities of amido compounds.
Small amounts of ketones and dimethyl furfurane.
16 grms. of pyrrols mixed with an indole.
42 grms. of indifferent oil, consisting chiefly of olefines and lesser quantities of paraffins and aromatic carbons.

The substances obtained by the extraction of bran with ether and other solvents are now being investigated.

Trade Notes.

Society of Chemical Industry : *Liverpool Section.*—The next meeting of the section will be held at the Chemical Laboratories, University College, on Wednesday, November 30th, at 7 30 p.m., when the following papers will be read :—1. "Note on the Solubility of Chlorine in Brine," by Dr. C. A. Kohn and Mr. F. O'Brien. 2. "Some Experiments on High-strength Hypochlorites," by Messrs Max Muspratt and E. Shrapnell Smith.

The Resin Market.—Prices of low grades have fluctuated a little. Stocks at Savannah and the other Southern ports were nearly 30,000 barrels lower than last year, although shipments also showed a decrease of 69,000 barrels since April 1st, scarcity of tonnage rather than a deficiency of European demand being given as the reason. In a fire in New York, on October 24th, 23,241 barrels were consumed. A fairly steady demand for all grades has been experienced in the London market, with rather weaker prices for common resin, owing to resales. The Liverpool market has been quiet, with practically unchanged prices.

Market Reports.

TAR AND AMMONIA PRODUCTS.

At last the low price of benzols is beginning to have a favourable effect upon the consumption, and 90's have been selling freely at 8½d., which price also holds good for 50/90's. There is no change to report in carbolic acids and naphthas. Anthracene is quoted 3¾d for 30% A, and 2¾d. to 3d for B. Pitch steady at 25s. f.o.b. East Coast.

Sulphate of ammonia is quiet but steady. Prices are variable according to source of information. Beckton still offers for January-June delivery at £10. Nearest closing prompt values may be taken as :—Beckton, £10. ; London outside makes, £10. ; Liverpool, £10. ; Hull, £9. 18s. 9d. to £10. ; and Leith, £9. 18s. 9d. to £10.

MISCELLANEOUS CHEMICAL MARKET.

In the chief products of the alkali trade the demand continues fairly active, and considerable business has been done for forward delivery over 1899. For home trade spot delivery prices are without material change. Alkali, 58%, is steady at £4. 2s 6d., bags, f.o.r., and £3 17s. 6d. forward contracts. Soda crystals and bicarbonate unaltered. Bleaching powder, forward delivery, £4 2s. 6d. to £4 5s., softwoods, free on rails. For export, £5. 5s to £5 10s., hardwood, casks, f o b. Chlorate of potash 3⅝d. per lb ; soda, 3¼d. per lb. In caustic soda there is an easier tendency, and forward business is being actively booked at lower prices. For prompt delivery there are no quotable changes and current quotations f.o.b. Liverpool are as follows :—77%, £7. 15s. ; 74%, £7. 10s. ; 70%, £7. : 60%, £6 nett per ton. Saltcake, 25s per ton bulk, f o r. Recovered sulphur, £4 12s. 6d per ton. Acetates of lime are firmer. Acetate of soda steady at £12. 10s. c.i.f, with better inquiry. Borax stands at £14. 10s. per ton. White powdered arsenic quiet at £16. 10s. f.o.r. Sulphate of copper has further advanced to £18. 10s. prompt, and £18. 15s. forward. Yellow prussiate of potash quiet at 6⅜d. per lb.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet : Scotch warrants closed at 49s. 3½d. ; Middlesbrough, 52s. cash ; and hematite, 58s. 8½d. Copper firmer : Chili bars, G.O.B.'s and G.M.B.'s, closed at £56. 1s. 3d. to £56. 6s. 3d. cash, and £56. 11s. 3d to £56. 16s. 3d. three months. Tin steady : Straits closed at £80. 11s 3d. to £81. 1s. 3d. cash, and £81. to £81. 10s. three months ; Australian, £81. 5s. ; English ingots, £84. Lead steady : Spanish, £13. 8s 9d. to £13. 10s ; English, £13. 13s. 9d. ; Silesian spelter, ordinary, £24. 12s. 6d. Nickel, 1s. 2½d. Antimony, £37. Quicksilver : First hands, £7. 10s. ; second hands, £7. 9s. *Copper shares* steady : Cape, 5⅛ to 5¼ ; Copiapo, 2 11/16 to 2 13/16 ; Libiola, 1⅞ to 2⅛ ; Mason and Barry, 3 1/16 to 3 1/16 ; Rio Tinto, 29 15/16 to 30 1/16 ; Tharsis, 7 7/16 to 7 7/16

GLASGOW, Wednesday.—Market flat, and a good business. Scotch done at 49s. 7½d. to 49s. 3d. cash ; also at 49s. 9d., 49s. 5d., and 49s. 6½d. month ; buyers, 49s. 3½d. cash ; sellers, 49s. 4d. Cleveland, buyers, 52s. cash ; no sellers. Cumberland hematite done at 59s. to 58s. 9d. cash ; and 59s. to 58s 8d. month ; buyers, 58s. 8½d. cash ; sellers, 58s. 9d. Middlesbrough hematite idle.

REPORT ON MANURE MATERIAL.

The market begins to show a between season tone, manure manufacturers being fully engaged in the preparations of their manures. There is nothing fresh to report in high grade phosphates of any descriptions. Raisers of South Carolina River rock, however, seem inclined to contract both for early shipment and for shipment over 1898 at 6d. per unit, c.i.f. to United Kingdom ports. No doubt the course of the freight market will have a material vent upon prices for 1898 shipment, and buyers for the most part are inclined to wait for the chance of lower freights after the heavy cotton and corn carrying of the world has been got through. There is large inquiry for bone meal, and £5. per ton, ex quay Liverpool, is the nearest value, both for spot and for shipment. Crushed East Indian bones are fetching better prices on the Continent than are obtainable in the United Kingdom. Nitrate of soda is, owing to arrivals, a shade easier on the spot, and 7s. 6d. per cwt. would be taken for ordinary quality. For fine quality 7s. 7½d. per cwt. is the quotation.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is steady. There is not much offering and prices are well maintained in the face of slack business. Olive keeps firm ; small sales have been made in Spanish at £29. 10s per tun. Linseed steady, with Liverpool makes in export casks at 17s. 9d. to 19s. cwt. Cottonseed is only in limited demand, but the market keeps steady at 15s. to 15s. 6d. cwt. Castor oil is fairly active, with good seconds Calcutta at 3 3/32d. store and 3d. ex quay ; first pressure French, 2 15/16d. ; Madras, 2¾d. per lb. Tallow is very steady, and selling well for shipment. Resin firm, with fine grades scarce, and likely to be since the loss of American stocks by fire. Spirits of turpentine moving well at 29s. 6d. cwt. spot. Petroleum steady, with American at 6⅝d. to 8d., and Russian refined 6d. per gallon.

CAKES.—With arrivals on the quay sellers of American Western linseed on the spot were rather pressing, and with consumers purchasing sparingly values have given way about 2s 6d., the quotation being now given at £7. to £7. 5s. Other imported descriptions were, however, in rather better request, and previous prices were steadily maintained, River Plate being still quoted at £7. 7s. 6d. to £7. 10s. usual terms, Bombay at £7. 10s. to £7. 12s. 6d., also usual terms, and Russian at £7. 10s. to £7. 12s. 6d. per ton net cash. Liverpool makes have moved moderately into consumption at former currencies, viz., £8. 2s. 6d. to £8. 15s. per ton, according to brand. Good to choice brands of American decorticated cottonseed are firmly held for previous rates, viz., £5 12s. 6d. to £6., according to quality, with a good business concluded thereat, and Liverpool makes sold to a moderate extent at £6. 7s. 6d to £6. 15s. per ton, according to brand, being steady prices. Undecorticated Liverpool makes continue to meet with a brisk demand from consumers, and values are steadily maintained at £4. 7s. 6d to £4. 15s., according to brand, whilst Egyptian on the spot remain quiet, and sellers still offer prime quality at £4. 5s. per ton, but there is not much passing.

COLOURS.—Prices are steady, and practically without change. Ochres : Oxfordshire—common £10., medium £12, best £15 ; Derbyshire—common 40s., medium 50s., best 60s. ; Welsh—best 9 s. ; seconds, 50s., and common, 18s. ; Devonshire, 40s. to 45s. ; French, J.C., 65s. Umber : 40s. to 45s. White lead : £16. Red lead unchanged. Venetian red : £6. to £10. Cobalt : Prepared oxide, 9s. 9d. ; black, 9s. ; blue, 6s. Oxide of iron : Common, £7. ; medium, £10. ; finest, £20. Zinc oxide : £22. 10s. to £25. ;

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

As had been partly expected, the recent strength of sulphate of ammonia suffered some declension as the middle of the month was attained, but the article is still fairly healty at about £10 to £10 2s 6d. for prompt f.o.b. Leith. There is as yet nothing on report for forward delivery. Sulphate of copper is reported firmer again with the prospect of a further advance. Borax also is coming under a rather higher quotation, but as for the rest of the ordinary chemicals, there is no change in the currency of the prices, although it appears to be the case that, on the forward basis, lower prices are being accepted for bleaching powder, 1899 deliveries. Mineral oils and solid paraffins continue at the recent advances in values, and things look rather less dismal for the industry in general. Another of the companies has fallen into line with the bulk by conceding the 2d. per ton of whale advance to the miners. Three months ago this would have been impossible.

Chief prices current are :—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne ; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne ; white alkali, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow ; caustic soda, white, 74° £7. 10s. 0d , 70/72° £7. 2s. 6d , 60/62° £6. 2s 6d. , and cream 60/62° £6. all nett, Liverpool ; bleaching powder, 35/37°, £5. 10s. nett, Tyne ; saltcake, 26s. 0d. ; borax, English refined, £14. 0s , and boracic acid, £25. nett, Glasgow ; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt casks, £6. 15s. nett, Liverpool ; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow) ; bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f o.b. Glasgow) ; chlorate of potash, 3¾d , less 5% Liverpool ; nitrate of soda, 7s.6d. to 7s. 9d ; sulphate of ammonia, £10. to £10. 2s. 6d. prompt f.o.b. Leith ; salammoniac, first and second white, £35. and £33. nett, any port ; sulphate of copper, £18. 0s. 0d. to £18. 5s. 0d. less 5% Liverpool ; paraffin scale, hard, 1½d. to 1⅝d. per lb., and soft 1¾d. per lb. ; paraffin wax, 120° semi-refined, 1⅞d. to 2⅛d. per lb ; paraffin spirit (naphtha), 7d. per gallon ; paraffin oil (burning), No. 1, 6½d. ; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower) ; ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 15s. Week's imports of sugar at Greenock were 14,500 bags beet unrefined.

LL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

—A good amount of interest appears to be gathering here as isability of the Hull and Barnsley Railway Co. joining the ilway Co., in the construction of a large deep water dock, fessing to see in the same the breakdown of a competition been stimulating to trade here. There is but little change prices of oils ruling a week ago. This morning the Anglo- Oil Co. advise the trade of an advance of 5s. per ton in price ghter gravity oils, with a slight reduction in price of some of r bodied mineral oils—as they say, to stimulate the demand er. The imports to date have been, as against same time a —Linseed, 388,761 qrs. against 629,796 qrs.; cakes (oil), ns against 9,139 tons, an increase of about 33⅓%; rapeseed, rs. against 78,589 qrs; cottonseed, 171,377 tons against tons; olive oil, 5,677 tuns against 4,201 tuns. Tar, 10,597 ainst 14,593 barrels. Linseed oil is steady at a reduction 10s. per ton, being quoted at 15s. 6d.; forward to April, per cwt., naked. Refined and Boiled £1. to £1. 10s. extra Refined cottonseed, oil spot, naked, 12s. 7½d., and April, at which there are sellers. Ordinary casks £1., and 1. 10s. per ton extra. Spirits of turpentine for large quanti- een sold: 27s. 6d. for prompt delivery and 28s. for next month, Resins are firm, from 4s. 9d. to 9s. 6d. per cwt., according Olive oil from £31. to £33. Oleines £17. 15s. f.o.b. here. soap unchanged. Cod oil, £16. to £18. per ton.

S.—Linseed cakes, 95% pure, £8. 2s. 6d. to £8. 5s. Oil- seed), £7. 2s 6d. to £7. 5s. Russians, £7. 7s. 6d. to 6d. Cotton cakes, best makes, £4. 5s. to £4. 6s. 3d.; 2s. 6d. per ton less; decorticated, £6. 5s. Rape cakes, , £4. per ton.

'S.—Makers are quiet with little prospect of improvement for t.

TYNE CHEMICAL REPORT.

TUESDAY.

rket is quiet, and, with the approach of winter, shipments off. For the home trade, the demand is still good. Soda are quoted at £2. 12s. 6d. per ton, gross weight, locally. % £7. and £7. 5s, and 76/77% £7. 15s. to £8. per ton. rm at £4. 15s. per ton.

ng powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per t; caustic soda, 76/77% £8. and 70% £7. 5s. tt; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, er ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett: white %, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, er ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, , 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per

ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett chloride of barium, refined crystals, £6. 15s. per ton, nett do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett: aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The demand continues fairly steady, though shipment are fully up to all requirements. Coke is steady, and in strong request locally. For export the demand has fallen off considerably. Best Northumbrian steam, 9s. 6d. to 9s. 9d. per ton; secon qualities, 8s. 6d to 8s 9d. per ton; small steam. 5s. 3d. to 5s. 6d. per ton; gas coals, 9s. to 9s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 17s. to 21s. per ton.

New Companies.

Commenda Petroleum Synd., Ltd.—CAPITAL £40,000. in £1. shares. This company has been formed to adopt an agreement dated November 17th, 1897, with the Gold Coast Exploration and Trading Co., Ltd., and to import, export, deal in, mnnufacture, and turn to account petroleum and other mineral oils, coal tar, pitch, asphaltum, &c. The subscribers to the memorandum of association are:—G. F. Jones, 12, Old Jewry Chambers, E.C., solicitor; J A D. Mackey, 175, Grange-road, Bermondsey, barrister; J. Muir, Horse Shoe Wharf, S.E., corn merchant; E. Vulut, 75, Coleman-street. E.C, secretary; J. P. Nurse, 102, East Dulwich-road, S.E., clerk; J. W. Corbidge, 19a, Coleman-street, E.C., traveller; A. D. Robinson, 76, Knowsley-road, Lavender Hill, S.W., clerk. Registered office, 75, Coleman-street, E.C.

Spooner & Bailey, Ltd.—CAPITAL £20,000. in £1. shares (8,000 6% cum. pref.). This company has been formed to adopt an agreement with J. & E. Bailey, and to manufacture, sell, and deal in chemicals, sulphuric acid, chemical manures, and oil cakes. The subscribers to the memorandum of association are:—J. Bailey, Ty-Gwyn, Westwood Park, Southampton, merchant; E. Bailey, Millbrook, Southampton, merchant; Miss M. C. Bailey, Ty-Gwyn, Westwood Park, Southampton; Rev. M. R. Bailey, The Beacon, Exmouth, Devon; J. A. Atkins, Southampton, agent; H J. Bailey, 28, Wimpole-street, W., solicitor; W. F. Marreco, 1, Clement's Inn, W.C., chartered accountant. Registered office, Totton, Southampton.

Trerice China Clay Co., Ltd.—CAPITAL £12,000 in £1. shares. This company has been formed to acquire, develop, and turn to account a licence to dig, search for work, and make merchantable china clay, china stone, and minerals, and to manufacture bricks at Trerice, in the parish of St. Austell, Cornwall, and to adopt an agreement with A. Coon. The subscribers to the memorandum of association are:—C. Mansfield, Central Exchange, Plymouth, printer; W. Marshall, Harbour Avenue, Plymouth, clerk; F. Halsey, Old Steine, Brighton, importer; B. Butland. 90, Old Town-street, Plymouth, jeweller; Miss J. Bowden, 4, Stafford Terrace, Plymouth; Mrs. H. Butland, 90, Old Town-street, Plymouth; J. M. Coon, Elm Cottages, St. Austell, engineer.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.
ending November 12th.

Acid—

	17 pks	Phillipps & Graves
	104	R. W. Greeff & Co.
	88	A. & M. Zimmerman
	£5 9	T. H. Lee
	263	Petri Brs.
	500	Thames S. T. & L. Co. Ltd.
	52	E. Catlin
	10 dms.	Petri Bros
	117 pks.	Little & Johnston
	40 c.	J. Barber & Co.
	107	J. Harrison
	33 pks.	R. W. Greeff & Co.

Sulphate—

	21 pks.	Yerrener & Co.
	£60	J. Barber & Co.
	£90	Craven & Co.
Italy,	£14	W. H. Mitchell
,,	525	W. Byford
,,	14	P. Henwood, Sons & Co.
,,	600	Cape Asbestos Co.
,,	65	W. Newbold
,,	105	British Asbestos Co.

Barium Chloride—

Holland,	£15	Petri Brs.
Germany,	22	,,

Barytes—

Germany,	4 pks.	Steinhoff, Son & Co.
,,	133	J. L. Lyon & Co.
Holland,	24	F. Claydon & Co.
,,	271	W. Harrison & Co.

Bitumen—

France,	15 t.	French Asphalte Co.

Bleaching Powder—

Holland,	23 pks.	J. M. Steel & Co.

Bleaching Soda—

Germany,	200 cs.	H. Lambert

Bone Meal—

E. Indies,	150 t.	Fox, Roy & Co.

Bones—

Queensland,	22 t.	Dalgety & Co., Ld.
,,	16	A. & W. Nesbitt

Borax—

Germany,	£65	J. E. Maeder

Caoutchouc—

Germany,	9 c.	Butler's Wf., Ld.
P. E. Africa,	52	Hale & Son
Straits,	50	L. & I. D. Jt. Co.
,,	650	H.W. Jewsbury,& Co.
Spain,	25	Prop. Bull Wf.
Zanzibar,	184	L. & I. D. Jt. Co.
U. States,	3	Lewis & Peat
France,	11	Major & Field
Holland,	2	J. Barber & Co.
P. W. Africa,	6	Hale & Son
Madagascar	21	Lewis & Peat
Rangoon,	67	E. Boustead & Co
Straits,	190	Prop Bull Wf.
Columbia,	20	,,
Germany,	8	Major & Field
Straits,	154	Gilman Brs & Co.
,,	45	Anderson, Weber & Smith
B. Honduras,	4	Major & Field
P. E. Africa,	57	L. & I. D. Jt Co.
Peru,	28	F. Huth & Co.
Holland,	92	Anderson, Weber & Smith
Straits,	540	Soundy & Sons

Castor Oil—

France,	6 brls.	W. J. Crook
,,	28	Moradunt Bros.
,,	10	F. Bochin
,,	50	Lucas & Spencer's Wf., Ld.
Italy,	10 cs.	Major & Field
E. Indies,	60	Perkins & Homer
,,	25	E. Bigland & Co.

Caustic Potash—

Germany,	5 cs.	Vinolia Co., Ld.
France,	10 dms.	Petri Brs.

Chemicals (*otherwise undescribed*)

Belgium,	£28	John Cockerill Line
,,	23	Typke & King
Germany,	37	R. W. Greeff & Co.
,,	13	J. W. Drysdale & Co.
,,	25	Butler's Wf., Ld.
,,	70	Craven & Co.
Belgium,	130	T. H. Lee
Germany,	30	L. & I. D. Jt. Co.
,,	1,080	A. & M. Zimmermann
Holland,	25	92 cs. T. H. Lee
U. States,	527	S. C. Jones
Germany,	137	H. Lambert
,,	5	G. Boor & Co.
Belgium,	36	D. T. Thomas & Son
Germany,	15	Petri Bros.

Copperas—

Germany,	£60	Burgoyne & Co.

Cream of Tartar—

Holland,	28 pks.	Kirkpatrick, Parr & Co.

Dyestuffs—
Aniline
France, 5 pks. Gellatly, Hankey & Co.
Germany, 3 Butler's Wf., Ld.
Argols
Italy, 825 pks. B. Jacob & Sons
" 36 Thames S. T. & L. Co., Ld.
Cape, 17 Hammond & Co.
Cochineal
Canaries, 12 pks. G. S. Bruce
" 25 W. M. Smith & Sons
" 10 Hendrey & Martin
" 13 Swanston & Co.
" 11 Sperling & Williams
Cutch
Straits, 40 pks. Prop. Hay's Wf
Divi Divi
E. Indies, 92 pks. Walker, Munnie & Co.
Extracts
France, 25 pks. B. & F. Wf. Co. Ld.
U. States, 2 American Express Co.
France, 148 Beresford & Co
" 100 S. M. Frankenstein & Co
" 48 T. H. Lee
U. States, 31 W. Dixon
Belgium, 15 Leach & Co.
Indigo
E. Indies, 8 chts. Kaltenbach & Schmitz
" 13 Park, Macfadyen & Co.
" 6 A. Young & Co
Logwood
U. States, 60 t. Union L. Co., Ld
B. Honduras 71 Belize Est. and Prod Co., Ld.
" 84 W. Shelcott
Madder
France. 3 pks. Skilbeck Brs.
Naphthaline
Germany, 48 pks. Fleming's Oil & Chem. Co., Ld.
Sumac
Italy, 2,050 pks. J. Kitchen, Ld.
" 100 H Johnson & Sons
" 140 A. Hartrodt
" 250 Colthurst & Harding
Tanners' Bark
Adelaide, 5 t. Rocke & Sons
Belgium, 40 L. & I. D. Jt. Co
Natal, 60 Flack, Chandler & Co.
" 120 J. T. Rennie, Son & Co.
Adelaide, 39 J. Greig
Turmeric
E. Indies, 60 pks. H. A. Litchfield & Co.
" 10 Perkins & Homer
" 250 L. & I. D. Jt. Co.
Valonia
Austria, 125 t. Boutcher, Mortimore & Co.
A. Turkey, 50 M. D. Co.
" 7 Anning & Cobb

Farina—
Holland, 50 pks. Dunlop Brs. & Co.
" 100 Thames S. T. & L. Co., Ld.
Belgium, 2 John Cockerill Line
Germany, 5 Butler's Wf., Ld.
" 50 W. C. Jacobs

Glucose—
U. States, 134 pks. 822 cwts. L. & Til. L. C. & D Co.
" 2,046 7,078 R. G. Hall & Co.
" 630 1,119 L. & I. D. Jt. Co.
" 50 288 A. E. Piggott
" 300 2,190 Oblenschlager Brs.
" 50 284 R. Johnson & Co.
" 100 600 E. & T. Pink
" 50 300 Page, Son & East
" 500 500 Trier, Meyer & Co.
Germany, 10 80 Beresford & Co.
U. States, 2,000 2,600 Pearce, Pelly & Co.
" 500 500 Fellows, Morton & Co.

Glue—
Belgium, £135 T. H. Lee
" 1,041 Capes & Self
France, 300 D. Mangus
" 34 Mory & Co.
Holland, 400 M. H. Voss
Germany, 20 O'Hara, Matthews & Co.
" 28 Butler's Wf., Ld.
France, 35 Burnett Brs. & Sons
Germany, 30 Craven & Co.
U. States, 70 Parsons, Fletcher & Co.
Germany, 70 L. & I. D. Jt. Co.
" 12 Bennett S. S. Co.,
" 79 M. Dk. Co.
" 600 Deering & Robottom
Holland, 25 Phillipps & Graves
47 W. W. Jones & Co.

Glue Stock—
Sydney, 100 bls T. J. & T. Powell
N. Zealand, 47 "
Belgium, 13 D. C. Thomas & Sons
Sydney, 33 Goad, Rigg & Co.
Queensland, 90 T. J. & T. Powell
U. States, 79 L. & I. D. Jt. Co.
Belgium, 50 Scriven Bros. & Co.
France, 13 B. & F. Wf. Co. Ld.

Glycerine—
France, £320 J. W. Cook & Co., Ld.
Holland, 420 J. Barber & Co.

Infusorial Earth—
Germany, £62 Snowdon, Sons, & Co., Ld.

Iron Chloride—
Holland, £70 J. Barber & Co.

Kainit—
Germany, 50 t. F. W. Berk & Co., Ld.

Lead Acetate—
France, £130 Beresford & Co.

Litharge—
Germany, 27 pks. Spies Brs. & Co.

Manganese—
Japan, 250 t. Fellows, Morton, & Co.
Germany, 5 R. Ulrich

Manganese Ore—
Holland, 11 t. Robinson, Roberts, & Co.

Mercury—
Italy, 100 flsks. H. Bath & Son

Methyl Alcohol—
France, 20 dms. E. Catlin

Molasses—
U. States, 50 cks. 225 c. G. Hornzee
" 100 550 Ohlenschlager Brs.
" 50 300 Carr & Sons
" 1,000 1,720 H. B. Booth
" 500 2,640 Falkenburg & Aesse
Germany, 1 1 M. Dk. Co.
Holland, 245 1,370 J. R. Francis & Co.

Ochre—
France, 36 pks. Burrell & Co.
" 2 L. & I. D. Jt. Co.
Holland, 20 Phillipps & Graves
Germany, 18 "
Spain, 81 Hemingway & Co

Oxalic Acid—
Germany, 2 pks. Butler's Wf., Ld.

Paraffin Scale—
U. States, 1,046 brls. Anglo-American Oil Co.

Paraffin Wax—
U. States, 350 cs. Anglo-American Oil Co.

Phosphates—
Belgium, 50 t. A. Hunter & Co.
France, 250 W. E. Cole

Pitch—
U. States, 34 cks. F. Gardner
Germany, 178 brls. D Smith

Plumbago—
Germany, 2 cks. 19 cs. Butler's Wf., Ld.
" 47 C. Tennant, Sons, & Co.
Italy, 200 bgs. J. Thredder, Son, & Co.
" 160 B. Gallaway
Ceylon, 316 brls. J. Thredder, Son, & Co.

Potash—
Germany, 2 c. Butler's Wf., Ld.

Potassium Bicarbonate—
Holland, 4 cks. A. & M. Zimmermann

Potassium Bromide—
Germany, £220 T. H. Lee
" 67 pks. Butler's Wf., Ld.

Potassium Carbonate—
Germany, 6 c. Butler's Wf., Ld.
" 200 Charles & Fox
Holland, 1,000 J. Owen
Belgium, 9 cks. F. Smith

Potassium Oxychloride—
Sweden, 120 kgs. G. Boor & Co.

Potassium Prussiate—
France, 24 pks. Blagden, Waugh, & Co.

Potassium Sulphate—
Germany, 200 pks. F. W. Berk & Co., Ld.
" 67 Anglo-Contl. Guano Works

Pyrogallic Acid—
Germany, 3 pks. R. W. Greeff & Co.

Rosin—
U. States, 2,000 brls. Prod. Brokers' Co., Ld.

Saltpetre—
Germany, 42 cks. J. Hall & Son
" 158 bgs. P. Hecker & Co.
E. Indies, 300 Lucas & Spencer's Wf.
" 1,199 Perkins & Homer

Soap—
Italy, £398 W. Balchin
" 115 J. W. Cook & Co., Ld.
France, 218 W. Balchin
" 43 Beresford & Co.
" 160 J. W. Cook & Co., Ld.
" 100 City Coml. Wf., Ld.
U. States, 72 Lunham & Moore
" 240 E. Fellingham
" 200 L. & I. D. Jt. Co.
" 10 Beck & Pollitzer
Holland, 110 Phillipps & Graves
Germany, 21 H. Lambert

Soda—
Belgium, £30 W. Slimmon
Holland, 100 R. W. Greeff & Co.

Soda Ash—
Germany, 2 c. Butler's Wf., Ld.
Belgium, 5,360 R. Waters

Sodium Prussiate—
Belgium, 15 cks. Blagden, Waugh, & Co.

Starch—
Belgium, 885 pks. T. H. Lee
" 208 J. Barber & Co.
" 101 Leach & Co.
" 190 T. Ronaldson & Co.
" 440 Becker & Wagner
" 10 J. Briant
" 160 C. Tennant, Sons, & Co.
France, 190 Prprs. Dowgate Dk.
" 5 J. Barber & Co.
" 15 L. P. D. Co.
" 170 W. E. Cole
" 170 E. & T. Pink
Holland, 35 Phillipps & Graves
" 108 Hernu, Peron, & Co.
" 960 A. Starck
" 56 Little & Johnston
Austria, 10 Bellamy's Wf., Ld.
Germany, 300 Horne & Co.
" 20 Lavington Brs., Ld.
" 280 Seaward Brs., Ld.
U. States, 464 C. Tennant, Sons, & Co.

Stearine—
U. States, 9 cks. Lunham & Moore
" 15 J. Goddard & Co.
" 12 L. & I. D. Jt. Co.
France, 100 H. Hill & Sons
Belgium, 250 256 pks. "
" 56 T. Ronaldson & Co.
" 63 pks. W. H. Mitchell

Sulphur—
Italy, 8 t. J. Kitchin, Ld.
" 48 G. Boor & Co.
" 10 Union Ltge. Co., Ld.
" 550 W. C. Bacon & Co.
" 5 A. E. Piggott
" 30 Charles & Fox

Sulphur Chloride—
Holland, £29 Typke & King

Talc—
Italy, £40 C. F. Gerhardt
E. Indies, 1,075 W. M. Smith & Sons
France, 44 Blackwell & Co.
U. States, 45 Hernu, Peron, & Co.
" 69 J. W. & T. A. Smith
Belgium, 36 John Cockerill Line

Tar—
N. Russia, 65 brls. Gerhard & Hey
" 72 Linck, Moeller, & Co.

Tartar—
Italy, 39 pks. B. Jacob & Sons
" 16 Howards & Son
" 8 Fellows, Morton, & Co.

Tartaric Acid—
Belgium, 10 pks. J. Harris
" 8 R. W. Greeff & Co
" 2 F. C. Devon & Co
Holland, 26 "
" 20 Kirkpatrick, Ban & Co
Ultramarine—
Holland, 27 pks. W. Harrison & Co
Varnish—
Germany, 43 pks. Butler's Wf., L
France, 3 Pinchin, Johnso & Co
Verdigris—
France, 4 pks. B. & F. Wf. C
Vermilion—
Hong Kong, 10 pks. W. M. Smi & So
Waste Salt—
Germany, 50 t. F. W. Berk & C L
White Lead—
Holland, 35 pks. Wilkins Heywood, & C
" 40 Randall B
Germany, 22 Taylor B
Belgium, 45 T. & W. Farmiloe, L
" 20 Wilkinson, Heywo & C
" 8 J. E. Kitt
" 37 Lyon & C
Wood Pulp—
Norway, 1,600 pks. J. Sha
Belgium, 5,886 F. Heydema
Sweden, 203 Taylor & Co., L
" 500 Tough & Henders
" 5,784 Henderson, Cra & C
" 1,234 W. E. Bott & C
" 400 Ekman Pulp Paper C
" 180 G. Harborg & C
Holland, 92 Becker & Wagn
Portugal, 1,000 Caima T. E. & Pu C

Zinc Oxide—
U. States, 500 pks M. Ashby, L
Germany, 40 "
" 9 R. W. Greeff & C
" 8 Spies Brs & C
Holland, 175 M. Ashby, L
" 80 Spies Brs. & C
" 50 J. Matt
Belgium, 20 Sawer, Sons, & C

LIVERPOOL.

Week ending November 10th.

Acetic Acid—
Rotterdam, 11 blns.
Albumen—
Latakia, 2 cs.
Alumina—
Antwerp, 20 cks.
Alumina Sulphate—
Rotterdam, 26 cks.
Barytes—
Antwerp, 54 cks. 30 bgs.
Rotterdam, 51
Bone Ash—
Campana, 882 bgs.
Bones—
Maranham, 40 bgs. H. Fra & C
Antwerp, 1
Carbolic Acid—
Rotterdam, 5 btls.
Chrome Ore—
Smyrna, 30 t.
Colours—
Antwerp, 7 cks.
Hamburg, 1 cs.
Rotterdam, 127 cks. 20 dms.
Cottonseed Oil—
Baltimore, 250 brls.
ChTstown, S.C., 500
Cream of Tartar—
Bordeaux, 88 cks.
St. Nazaire, 1
Dyestuffs—
Argols
Bordeaux, 50 cks.
Divi Divi
Hamburg, 41 bgs.
Extracts
Philadelphia, 200 bxs. 28 brls.
Halifax, 165 cks. Boutche Mortimore & Co
Ghent, 10 brls.
Bordeaux, 32
Amsterdam, 20 99 pks.

ews, 50 H. Rooke & Sons
793 bls. 774 bgs.
ams
2,347 bgs. D. Sassoon & Co.
659
5 bls. C. Harris & Co.
30
ple, 139 bgs.
348
400 77½ t. Barry Brs.
(otherwise undescribed)
s, 1,000 bgs.
12 bgs.
5 cs.
100 brls. Colby & Co.
200
50
10 cks.
s, 250 brls.
, 20 bls. Anglo-American Oil Co.
100
39 crts. T. Robinson & Sons
24 cks. Co-op. W'sale Society, Ld
3 kgs. J. L. Duguid
3 brls. & Co.
3 crts. 2 cs.
1 dm.
hite—
100 bgs. R. J. Francis & Co.
60 cks.
5 brls. Musson & Co.
1 1 Pearson, Benion & Co.
10 cs.
20 brls. Anglo-American Oil Co.
32 cs.
ale—
499 brls. Anglo-American Oil Co.
585 brls.
200
6,580 bgs. J. T. Fletcher & Co.
3,000 t.
100 cs.
2 cks. Sachse & Klemm
2,498 t. Matheson & Co.
2 cs. Calvert Brs.
331
200
4 dms.
180 bgs. 16 cs. Geo. G. Blackwell, Sons & Co.
ate—
75 brls.
400 sks.
100 bgs. T. W. Simonds & Sons
310 T. M. Duche & Sons
60 cs.
120 J. T. Fletcher & Co.
126
152 bgs. J. T. Fletcher & Co
41 bgs. 2 cks.
50 tcs
7 bls.
ates—
500 bgs.

Tallow—
Zarate, 178 pps. J. Nelson & Sons, Ld.
Campana, 252 cks.
Montreal, 38 brls. T. Nickel & Co.
" 125
Tartaric Acid—
Rotterdam, 22 cks.
Marseilles, 1
Ultramarine—
Hamburg, 4 cs.
White Lead—
Antwerp, 7 cks.
Rotterdam, 44
Wood Pulp—
Rotterdam, 305 bls.
Boston, 1,350
Zinc Ashes—
Bordeaux, 202 pks. R. J. Francis & Co.
Zinc Oxide—
Antwerp, 168 brls.
Zinc White—
Rotterdam, 8 cks.

MANCHESTER.

Week ending November 12th.

Acetate of Lime—
Rouen, 154 bgs.
Acetic Acid—
Rotterdam, 70 crbys.
Alizarine—
Rotterdam, 18 cks.
Aniline Oil—
Rotterdam, 2 dms.
Antimony Bifluoride—
Hamburg, 4 cks.
Antimony Salts—
Hamburg, 3 cks.
Asbestos—
Antwerp, 1 cs.
Barytes—
Rotterdam, 2 cks.
Beta-Naphthol—
Rotterdam, 2 cks.
Carborundum—
New York, 2 kgs.
Cement—
Antwerp, 370 bgs.
Ghent, 1,000
Chemicals *(otherwise undescribed)*
Antwerp, 4 cks.
Gothenburg, 60
Hamburg, 34 dms.
Rotterdam, 10
Rouen, 77
Colours—
Antwerp, 6 cks. J. T. Fletcher & Co.
" 8
Hamburg, 29 cs.
Rotterdam, 49 / 38 / 108 brls.
Cottonseed Oil—
New York, 23 brls.
Cream of Tartar—
Rotterdam 20 kgs.
Dyestuffs *(otherwise undes.)*—
Antwerp, 79 bgs.
Extracts—
Rotterdam, 10 cks.
Farina—
Hamburg, 519 bgs.
Gelatine—
Rouen, 3 cs.
Glucose—
New York, 50 brls.
Glue—
Antwerp, 2 cks. J. T. Fletcher & Co.
" 4 bls.
Hamburg, 40 bgs. / 3 cks.
Rouen, 71 26 cs. 60 / 100 bgs. 1 pk.
Lead Chloride—
Hamburg, 1 ck.
Limestone—
Antwerp, 20 cs.
Paraffin Scale—
New York, 651 brls. / 215 cs.
Phosphorus—
Montreal, 60 cs.
New York, 20
Potash—
Dunkirk, 9 dms.
Hamburg, 10 cks.
Rotterdam, 11
Pyrites—
Huelva, 1,638 t.
Sodium Nitrate—
Rotterdam, 43 cks. 37 brls.
Sodium Sulphate—
Rotterdam, 2 dms.
Starch—
Antwerp, 482 cs.
Hamburg, 120
Rotterdam, 128
Tannic Acid—
Hamburg, 2 cks.
Tartaric Acid—
Hamburg, 16 cks.
Rotterdam, 20 kgs. / 20 cks.
Ultramarine—
Hamburg, 2 cks.
White Lead—
Antwerp, 3 cks.
Wood Pulp—
Christiania, 2,550 bls. W. H. Ingram
" 1,161
Drammen, 253 "
" 3,712
Gothenburg, 2,244 1 prcl.
Hamburg, 400 bdls.
New York, 53 cs.
Skien, 960 W. H. Ingram
" 2,605
Zinc Oxalate—
Hamburg, 2 cks.
Zinc Oxide—
Antwerp, 30 cks
New York, 100 brls.
Rotterdam, 20
Zinc Sulphate—
Rotterdam, 2 brls.
Zinc White—
Rotterdam, 10 cks.

HULL.

Week ending November 12th.

Acids—
Bari, 58 pks. Wilson, Sons, & Co., Ld.
Antimony—
Hamburg, 22 cs. Wilson, Sons, & Co., Ld.
Asbestos—
Helsingfors, 56 pks. J. Good & Sons
Barytes—
Antwerp, 179 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 24 Hull & Netherlands S. S. Co.
Bog Ore—
Antwerp, 140 t.
Bone Meal—
Kurrachee, 500 bgs.
Chalk—
Rouen, 5 cs. Rawson & Robinson
Chemicals *(otherwise unaescribed)*
Antwerp, 4 pks. Wilson, Sons, & Co., Ld.
Hamburg, 7 cks. "
Colours—
Antwerp, 39 pks. Wilson, Sons, & Co., Ld.
Hamburg, 7 "
Rotterdam, 3 brls. / 255 pks. / 42 cks. Hull & Netherlands S. S. Co.
Stettin, 25 Wilson, Sons, & Co., Ld.
Dyestuffs—
Extracts
Fiume, 17 brls.
Trieste, 10 Wilson, Sons, & Co., Ld.
Fustic
Trieste, 5 t. Wilson, Sons, & Co., Ld.
Logwood
Hamburg, 200 bgs. Wilson, Sons, & Co., Ld.
Myrabolams
Bombay, 1,860 bgs.
Shumac
Palermo, 1,250 bgs.
Trieste, 51 Wilson, Sons, & Co., Ld.
Valonia
Smyrna, 205 t. / 682 bgs.
Dyestuffs *(otherwise undes.)*—
Antwerp, 703 bgs. Wilson, Sons, & Co., Ld.
Farina—
Amsterdam, 30 bgs. Hull & Netherlands S. S. Co.
Hamburg, 1,700 Wilson, Sons, & Co., Ld.
Harlingen, 100 bls. Hull & Netherlands S. S. Co.
1,220 bgs.
Gelatine—
Rouen, 10 cs. Rawson & Robinson
Glucose—
New York, 750 brls.
Glue—
Antwerp, 50 bls. Bailey & Leetham, Ld.
Christiania, 1 brl. Wilson, Sons, & Co., Ld.
Dunkirk, 10 bls. "
New York, 1 cs. "
Rotterdam, 1 bg. Hull & Netherlands S. S. Co.
Rouen, 140 cs. Rawson & Robinson
Glue Stock—
Hamburg, 88 bls. Wilson, Sons, & Co., Ld.
Kaolin—
Rotterdam, 246 bgs. Hull & Netherlands S. S. Co.
Lead Acetate—
Rotterdam, 14 cks. Hull & Netherlands S. S. Co.
Limestone—
Antwerp, 1 crte. Wilson, Sons, & Co., Ld.
Lithopone—
Rotterdam, 40 cks. Hull & Netherlands S. S. Co.
Magnesia—
Antwerp, 207 bgs. Bailey & Leetham, Ld.
Nitre Salt—
Hamburg, 28 bgs.
Ochre—
Bremen, 2 cs. Veltmann & Co.
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.
Paint—
Bergen, 2 kgs. Wilson, Sons, & Co., Ld.
Paraffin Wax—
New York, 440 bgs. Wilson, Sons, & Co., Ld.
Potash—
Dunkirk, 16 pks. Wilson, Sons, & Co., Ld.
Pumice Stone—
Messina, 90 pks.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 1 ck. "
Soap—
Bari, 41 cs.
Soda—
Antwerp, 2 cks Bailey & Leetham, Ld.
" 17 pks Wilson, Sons, & Co., Ld.
Ghent, 100 bgs. "
Starch—
Amsterdam, 160 cs. Hull & Netherlands S. S. Co.
Antwerp, 80 Wilson, Sons, & Co., Ld.
Bremen, 394 Veltmann & Co.
Dunkirk, 50 bgs. Wilson, Sons, & Co., Ld.
Ghent, 16 cs. "
Sulphur—
Catania, 200 pks. Wilson, Sons, & Co., Ld.
" 2,275
Tallow—
Dunkirk, 274 tcs. Wilson, Sons, & Co., Ld.
New York, 240 "
Tar—
Konigsberg, 100 brls.
Turpentine—
Liban, 52 cks. Redfern & Chatterton
Ultramarine—
Bremen, 4 cks.

White Lead—
Amsterdam, 58 cks. Hull & Netherlands S. S. Co.
Antwerp, 72 Bailey & Leetham, Ld.
Ghent, 8 brls. Wilson, Sons. & Co., Ld.
Rotterdam, 40 cks. Hull & Netherlands S. S. Co.

Whiting—
Stettin, 92 cks. Wilson Sons, & Co., Ld

Wood Pulp—
Hamburg, 200 pks. Wilson, Sons. & Co., Ld.
Helsingfors, 237 bls. J. Good & Sons

Zinc Oxide—
Antwerp, 75 cks. Bailey & Leetham, Ld.

GLASGOW.

Week ending November 17th

Aluminium—
Bombay, 2 cs.

Arachide Oil—
Rotterdam 4 cks. J. Rankine & Son

Asbestos—
Montreal, 400 bgs.

Barium Sulphate—
Antwerp, 1,100 bgs. 75 cks.

Barytes—
Rotterdam, 25 cks. J. Rankine & Son
Hamburg, 60 bgs

Bleaching Powder—
Rotterdam, 46 cks. J. Rankine & Son

Carborundum—
New York, 7 kgs.

Castor Oil—
Marseilles, 39 brls.

Chemicals *(otherwise undescribed)*
Gothenburg, 80 kgs.

Chrome Alum—
Rotterdam, 15 brls. J. Rankine & Son

Colours—
Rotterdam, 5 cks. 7 bxs. 11 brls. J. Rankine & Son

Cottonseed Oil—
New York, 100 brls.

Cream of Tartar—
Bordeaux, 2 cks.

Dextrine—
Stettin 50 bgs.
New York, 8

Dyestuffs—
Alizarine
Rotterdam, 14 brls. J. Rankine & Son

Extracts
Newport News, 50 brls.

Indigo
Rotterdam, 16 chts. J. Rankine & Son

Shumac
Marseilles, 51 bgs.

Farina—
Stettin, 1,860 bgs.

Glucose—
New York, 500 brls.
Boston, 100 hf. brls.
Stettin, 10 cks.

Glue—
Antwerp, 7 cks.
Rotterdam, 20 bgs.
Christiania, 100
Rouen, 50 cks.

Iron Oxide—
Montreal, 1 bx.

Lead Acetate—
Hamburg, 20 cks.

Molasses—
New York, 733 brls.

Ochre—
New York, 110 brls.
Marseilles, 10
Hamburg, 1 ck.

Painters' Colours—
Antwerp, 2 cks

Paraffin Scale—
New York, 300 brls.

Potassium Chlorate—
Antwerp, 50 cks.

Saltpetre—
Hamburg, 70 cks.

Soap—
Marseilles, 3 cs.

Sodium Sulphate—
Rotterdam, 1 brl. J. Rankine & Son

Starch—
New York, 198 bgs.
N port News, 1,275 sks.

Stearine—
Antwerp, 28 bgs.
Boston, 75 tcs.

Tannic Acid—
Hamburg, 1 ck.

Tartar—
Bordeaux, 7 cks.

Tartaric Acid—
Antwerp, 2 cks.

Tin Oxide—
Rotterdam, 1 ck. J. Rankine & Son

Ultramarine—
Rotterdam, 3 cks. 2 cs. J. Rankine & Son

Varnish—
New York, 8 brls. 7 cs. 2 hf. brls.

Waste Salt—
Hamburg, 266 cks.

White Lead—
Rotterdam, 119 cks. J. Rankine & Son

Wood Pulp—
Gothenburg, 351 bls. 201 rolls.
Gefle, 5,300 Henderson, Craig & Co.
Oporto, 250
Hamburg, 405
Christiania, 3,166 25 cs.

Zinc Oxide—
New York, 130 brls.

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending November 12th

Antimony—
Hamburg, 624 cs. Tyne S. S. Co.

Barytes—
Hamburg, 100 bgs. Tyne S. S. Co.
Rotterdam, 104 cks. ,,

Calcium Carbide—
Antwerp, 16 cks. Tyne S. S. Co.

Colours—
Hamburg, 1 cs. Tyne S. S. Co.
Rotterdam, 1 ck. ,,

Dyestuffs *(otherwise unaescribed)*
Antwerp, 1,223 bgs. Tyne S. S. Co

Farina—
Hamburg, 50 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 15 crts. Tyne S. S. Co.

Paraffin Scale—
New York, 210 brls. J. Cooke & Co.

Phosphates—
Dunkirk, 290 t. Stephenson's Chemical Co.

Soap—
Rotterdam, 6 cs. Tyne S. S. Co.

Stearine—
Antwerp, 19 bgs. Tyne S. S. Co

Wood Pulp—
Christiania, 40 bls.
Risoer, 264

GOOLE.

Week ending November 9th.

Alizarine—
Rotterdam, 102 cks. 14 cs.

Antimony—
Boulogne, 8 cks.

Barytes—
Antwerp, 19 cks.
Rotterdam, 100 bgs.

Chemicals *(otherwise unaescribed)*
Hamburg, 5 cs.

Colours—
Hamburg, 48 cks. 8 cs.

Dyestuffs *(otherwise unaes...)*
Amsterdam, 1 ck.
Antwerp, 625 bgs.
Ghent, 122
Boulogne, 3 cks. 7 cs. 184 pkg...
Rotterdam, 377 53

Farina—
Delfszyhl, 325 bgs.
Hamburg, 600

Glue—
Antwerp, 6 cks.
Rotterdam, 100 bgs.

Phosphates—
Ghent, 1,000 bgs.

Potassium Sulphate—
Dunkirk, 10 cks.
Rotterdam, 13

Saltpetre—
Antwerp, 85 bgs.
Rotterdam, 100

Starch—
Ghent, 36 cs.
Hamburg, 80
Rotterdam, 10

Tartaric Acid—
Rotterdam, 2 cks.

Wood Pulp—
Rotterdam 83 bs.

GRIMSBY.

Week ending November 12th.

Caoutchouc—
Antwerp, 3 cs.
Hamburg, 1
Rotterdam, 1

Colours—
Antwerp, { 2 kgs. 2 cks. } 137 pkg...
Hamburg, 33 20 cs. 37
Rotterdam, 21

Dyestuffs *(otherwise unaes...)*
Dieppe, 25 cks.

Farina—
Hamburg, 300 bgs.

Glue—
Dieppe, 8 cks. 4 ck...

Indigo—
Rotterdam, 17 cs.

Starch—
Antwerp, 30 cs.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 16th.

Alkali—
New York, 9 t. 13 c. £136
Pt. Darwin, 12 5

Alum—
Salonica, 10 t. £58
Rabat, 50 brls. 55

Alum Waste—
Calcutta 40 t. 2 c. £98

Ammonia—
Calcutta, 12 cs. £16
Melbourne, 30 41

Ammonia (Anhydrous)—
Rotterdam, 15 cyldrs £41
Napier, 21 167

Ammonium Carbonate—
Christiania, 10 t. £14
Dunkirk, 2 10 c. 65

Ammonium Chloride—
Melbourne, 1 t. 5 c. £93
Madras, 1 2 33
Christiania, 1 18
Adelaide, 5 cks. 20

Ammonium Sulphate—
Barbadoes, 50 t. £525
Demerara, *48 t. 13 c.* *478*
Bordeaux, 20 14 200
Calcutta, 11 10 120
Bremen, 200 1,905
Dunkirk, 29 1 284

Bisulphite of Lime—
Calcutta, 3 t. 4 c. £59

Boracic Acid—
Auckland, 1 t. 17 c. £28

Borax—
Pt. Elizabeth, 10 c. £29
E. London, 5 cs. 12
Melbourne, 1 t. 14

Caustic Soda—
Lyttelton, 6 t. 11 c. £50
Auckland, 1 13
E. London, 1 10 30
Dunedin, 4 10
Philadelphia, 67 400
Wellington, 3 11 30
Aden, 5 6
E. London, 5 6

Chemicals *(otherwise undescribed)*
Salonica, 10 cs. £56
Perth, 147 pks. (pt.) 10 3 pks. 173
Antwerp, 10 kgs. 3 brls. 75 dms. 124
Sydney, 12 2 cs. 52
Hamburg, 4 cks. 124
Brisbane, 15 7 pks. 43
Bombay, 8 34 132
Adelaide, 9 cs. (pt.) 7 86
E. London, 10 35 135
Invercargill, 2 cks. 23
Pt. Elizabeth, 25 23
Cape Town, 3 17
Bordeaux, 10 84
Boston, 18 38
Dunkirk, 21 dms. 75
Pt. Darwin, 3 14
Shanghai, 10 cs. (pt.) 10
Calcutta, 1 26
Melbourne, { 133 pks. (pt). 200 kgs. 12 cks. 2 cs. } 369
Copenhagen, 3 dms. 7
Demerara, 6 pks. 12

Citric Acid—
Karachi, 3 c. £22
St. Petersburg, 3 cks. 100
Fremantle, 1 8
Seville, 15 98
New York, 1 8
Perth, 1 7

Coal Products—
Alizarine
Boston, 38 cks. £395
Lyttelton, 11 pks. 147
Reval, 6 cs. 280
Aniline
Melbourne, 3 cs. £52
Calcutta, 2 79
Aniline Oil
Rotterdam, 10 dms £260
New York, 20
Anthracene
Cologne, 753 cks. £...
Anthracene Oil
Helsingborg, 1,000 brls.
Benzine
E. London, 19 dms...
Benzol
Boulogne, 47 cks.
Carbolic Acid
Pt. Elizabeth, 1 cs. 30 dms...
Bombay, 100
Creosote
Dieppe, 23 500 galls.
Baltimore, 500 cks.
New York, 500
Creosote Oil
Newport News, 500 cks.
Dyes
Boston, 1 cs.
Naphtha
Melbourne, 30 dms...
Adelaide, 10
Naphthaline
Stettin, 12 cks.
Hamburg, 7
Pitch
New York, 400 cks.
Alexandria, 200 brls.
Halifax, 177
Antwerp, 1,426 cks...

6 14
10 9
33 36
56 123
300 170
1,250 t. 1,500
110 t. 70 dms. 121
150 —

e Bases
4 dms. (109

30 cks. £23
150 dms. 8
442 brls. 204
50 32
10 rnlts. 50 25
225 8
20 190 57
167 pks. (pt.) 10
5 cks. 7
550 527

10 cks. £35
10 18
15 brls. 20

ilphate—
5 t. 12 c £90
1 17
10 184
50 878
5 5

Tartar—
10 c. £39
10 40

ants—
15 pks. £17
832 175
6 cs. 15
3 10
205 127
15 20
223 49
663 65
26 23
125 200 dms. 197
5 22
50 10
20 cks. 23
100 20

245 t. 15 c. £1,126
n, 329 8 1,492
s., 12 100
10 10 56
255 385
:th, 30 400
50 650

d—
s., 14 carbys. £28

id—
1 t. 3 cks. £63
30 kgs 45
3 27

—
n, 11 c. £8

us—
6 cs. £58

ilts—
4 t. 19 c. £364

Bicarbonate—
ia, 2 t. 3 c. £57
6 8

a Bichromate—
neiro, 18 c. £30
1 t. 32

a Chlorate—
n, 1 t. 8 c. £45

a Cyanide—
1 t. 10 cs. 0 pks. £424
9 19 c. 835
3 10 392
lay, 1 45 cs. 612
5 513
5 550

a Prussiate—
11 c £30
20 cks. 330

Blue—
1 ck. £13

—
135 t. £236

—
neiro, 7 t. 1 c. £139
2 4 47
10 11
13 13
5 10 104
2 13 56

)—
ls, 31 cks. £194
50 cs. 100 dms.
146 pks. 513

Auckland, 200 375
Tierra del Fuego, 40 150
B. Ayres, 2,650 5 963
Santa Cruz, 4 34 174
80 dms. 710
Sydney. 6 t. 3 c. 174
Melbourne, 200 125
San Julian, 15 cs. 10
12 pks. 86
Galveston, 1,250 1,563
Cape Town, 250 313
E. London, 300 376
Durban, 400 500
Pt. Elizabeth, 1,500
750 dms. 346

Soda—
Melbourne, 19 c. £36
Auckland, 5 t. 8 25

Soda Crystals—
Brisbane, 1 t. £6
Bombay, 1 21

Sodium Bicarbonate—
Karachi, 3 t 16 c. £26
Perth, 1 7
Odessa, 10 72
Demerara 1 8
Auckland, 1 7
Chinde, 4 6

Sodium Carbonate—
Pt Elizabeth, 1 t. £11

Sodium Silicate—
Wellington, 2 t. 14 c. £12

Sulphur—
Madeira, 14 c. £6

Sulphuric Acid—
E London, 45 cs. £11
Durban 20 pks. 16

Superphosphates
Sydney. 15 c. £25
Colombo, 10 t. 4 38
Calicut, 15 7 80

Tartaric Acid—
Fremantle, 8 c £46

LIVERPOOL.

Week ending November 16th.

Acetic Acid—
Lisbon, 1 t. 14 c. £34

Alkali—
Rio Grande, 3 t. 5 c. 1 q £15
Lisbon, 55 2 220
Galatz, 12 17 3 50
Cavalla, 1 11 3 6
Genoa, 112 16 3 504
Hamburg, 2 1 8
B. Ayres, 16 9 3 130
Maranham, 4 19 1 20
Ceara, 1 18 2 6
Adelaide, 8 38
Sydney, 8 6 3 50
Fremantle, 2 14 15
E. London, 1 5 2 6
Bilbao, 9 8 3 35

Alum—
Santos, 1 t. £5
Sydney, 6 4 c. 3 q. 30
Vigo 7 3 8
Montreal, 4 5 3 21
Smyrna, 4 6 23
Gibraltar, 1 5
Volo, 2 1 10
Calcutta 29 9 147
Rangoon, 2 19 3 17
Alexandria, 6 15 34

Ammonia—
Campana, 2 t. 13 c. £118
Vera Cruz, 3 2 q. 5

Ammonia (Anhydrous)—
Colombo, 2 c. 1 q. £40

Ammonium Carbonate—
Genoa, 4 t. 12 c. £118
Copenhagen, 9 14 3 q. 231
Barcelona. 1 1 28
Hamburg, 10 1 14
Dantzig, 10 14
Bremen, 10 2 15
Odessa, 5 112
Vigo, 15 1 21
Ancona. 4 kgs. 5

Ammonium Chloride—
Copenhagen, 9 c. £14
Trieste, 1 ck. 1 t. 8 1 q. —
Bombay, 3 14 125
Ancona, 11 1 —
Sfax, 5 2 9
Karachi 1 10 40

Ammonium Sulphate—
Bordeaux, 20 t. £200
Carthagena, 5 4 c. 50
Valencia, 159 13 2 q. 1 550
Genoa, 29 3 1 295
Lisbon, 10 2 90
Bari, 10 8 104
Hamburg, 10 3 2 101
Oporto, 8 80
Las Palmas, 11 12 115
Cullera, 1 3 3 1,103
Barcelona, 8 8 85
Tarragona, 5 6 2 53
Montreal, 10 99

Arsenic—
Vigo, 4 c. 2 q. £7

Basic Slag—
Melbourne, 250 t £500
Fremantle, 11 6 c. £25

Bleaching Powder—
Barcelona, 38 cks.
Bombay, 20 cs.
Boston, 341
Brussels, 15
E. St. Louis, 37
Everitt, 83
Havana, 15
Leghorn, 27
Melbourne, 1
Naples, 32
Newport News, 36
New York, 205 25
Norrkoping, 15
Odessa, 30 kgs. 20 brls.
Philadelphia, 112 cks.
Portland, 81
Rotterdam, 21
Rouen, 10
Seville, 20
Trieste, 56
Valencia. 4
Vera Cruz, 100

Borax—
Stockholm, 3 t. 5 c. 3 q. £45
Montreal, 20 18 372
Hamburg, 21 3 308
E. London, 3 13 53
St. Thomas, 2 3 9
Syra, 5 4
Adelaide, 10 7
Brantford 5 70
Santos, 1 14
Boksburg, 1 14
Algoa Bay, 6 4
Lisbon, 2 1 1 30
Natal, 18 14
Melbourne, 1 14
Sydney, 1 11
B. Ayres, 6 6
Rotterdam, 6 1 84
Vera Cruz, 15 11

Calcium Chloride—
Genoa, 2 t. 12 c. £6
Rouen, 10 23

Carbolic Acid—
Shanghai, 18 c. 1 q £7
St. Croix, 18 2 20
Sydney, 1 t. 19 3 38
Baltimore, 5 2 117
Rouen, 4 10 2 89
Halifax, 14 2 34
Naples, 3 bxs. £5

Caustic Potash—
Barcelona, 1 t. 15 c. £52
New York, 1 1 28

Caustic Soda—
Adelaide, 18 dms.
Alicante, 30
Amsterdam, 146
Ancona, 17
Antwerp, 18
Barcelona, 119 62 cks.
Bari, 12
Bombay, 83
Bordeaux, 18
Boston, 51
Ceara, 3
E. London, 9 cs.
Galatz, 50
Genoa, 215
Hamburg, 324
Ibrail, 50
La Guayra, 35
Lahore, 20
Leghorn, 53
Malaga, 181
Malta, 10
Maracaibo, 10
Maranham, 28
Melbourne, 2
Montreal, 15 cks.
Nantes, 30
Naples, 22
Para, 30
Pasages, 22 pks.
Pelotas, 10
Pernambuco, 270
Piræus, 240
Quebec, 25
Rangoon, 25
Rosario, 100
Rotterdam, 46
Rouen, 49
Samarang, 49
San Juan, 12
San Sebastian, 40
Santos, 65
Sao Paulo, 120
Seville, 230 12 brls.
Tanga, 10
Trieste, 54
Vera Cruz, 83

Chemicals *(otherwise undescribed)*
Rio de Janeiro, 4 t. 2 q. £320
Rouen, 4 c. 2 40
Calcutta, 68 18 3 187
Malta, 2 3 3
Piræus, 3 2 52
Rotterdam, 63 12 96
Stettin, 1 3 2 17
Genoa, 1 14
Victoria, B.C., 17 11
Konigsberg 4 3 4
Algoa Bay, 3 4
Cape Town, 4 3 5
Melbourne. 6 84
Philadelphia, 13 4 357
Hamburg, 14 26
Pernambuco, 9 13
Montreal, 6 9 2 85

China Clay—
Baltimore, 100 cks.
Boston, 1,538
Calcutta. 540
Portland, Me, 50
Tampico, 14
Barcelona, 751 bgs.
Leghorn, 1,003

Citric Acid—
Brisbane, 2 c. £7
Mexico, 5 32
Bombay, 1 3 q. 6

Coal Products—
Aniline Oil
Barcelona, 13 cks.
Boston, 5 dms.
Rotterdam, 19
Rouen, 4
Aniline Salts
Alexandretta, 15 brls.
Madras, 10
Piræus. 2 t. 2 c.
Dyes
Calcutta, 3 cs.
Naphtha
Melbourne, 50 dms.
Pitch
Bilbao, 40 cks.
Callao, 20 pks.
Tar
Delagoa Bay, 150 dms.
Philadelphia, 100 brls.
Victoria, B.C., 20

Cobalt Oxide—
New York, 4 c. 2 q. £175

Copperas—
Calcutta, 37 t. 10 c. £85
Syra, 2 16 2 q. 6
Jaffa. 1 14 1 3
Tripoli, Syria, 3 18 3 8
Beyrout, 3 8 3 5

Copper Sulphate—
Vancouver, B.C., 2 t. 5 c 3 q. £39
Rouen, 11 4 105
M. Video, 5 80
B. Ayres, 2 17 2 46
Ghent. 5 1 80
Constantinople, 7 8 3 119
Sydney, 3 49
Smyrna. 2 45

Cream of Tartar—
Brisbane, 1 c. £5

Disinfectants—
Rangoon, 1 t. 5 c. 1 q. £21
Bombay, 2 10 14
Calcutta, 3 14

Dried Blood—
Rouen, 8 t. 10 £75

Dyestuffs—
Aniline Colours
Barcelona, 5 cks. 15 cs.
New York, 13
3 kgs.
Boston, 8
Canada, 3
Extracts
Boston, 20 cks. 25 brls.
Piræus, 2
Montreal, 17 5 cs.
2 kgs.
Logwood
Alexandria, 70 bgs.
Smyrna. 50

Dyestuffs (*otherwise undescribed*)
New York, 20 cks.
Rouen, 3 pks.

Glycerine—
Bilbao, 8 c. 2 q. £16
Alexandria, 10 3 19
Montreal, 4 t. 5 220
Habana, 4 3 17

Guano—
Barcelona, 34 t. 8 c. £267

Gypsum—
Norrkoping, 35 t. 3 c. £90
Galatz, 17 3 2 q. 57

Magnesia—
San Juan, 7 cs.
Seville, 15

Magnesium Chloride—
Hiogo, 4 c 1 q. £3
Melbourne, 1 t. 18
Rouen, 10 5 24

Manure—
Las Palmas, 6 t. £50
Malaga, 40 280
Santa Cruz, 5 49

Oxalic Acid—
Barcelona, 12 c. £18
Boston, 7 t. 4 200

Paint—
Antwerp, 7 cks. 10 brls. 52 pks.
Barbadoes, 1 8 kgs.
Beira, 2 cs.
Beyrout, 1 70
Bilbao, 22
Bordeaux, 1
B. Ayres, 30
Cape Town, 40 dms.
Delagoa Bay, 2.0
Guayaquil, 12
Gibraltar, 56 43 pks.
Hamburg, 14
Hong Kong, 160 2 brls.
Honolulu, 50 dms.
Lahou, 2
Limassol, 2
Maceio, 1
Monrovia, 10
M. Video, 3
Nassau, 8
Rio G. do. Sul, 11 brls.
St. Thomas, 127 pks.
San Juan, 2 160
Singapore, 1,001
Smyrna, 203
Talcahuamo, 3
Trieste, 40 dms.

Painters' Colours—
Alexandria, 15 cks.
Bahia 112
Barcelona, 2 1 cs.
Ceara, 32 brls.
Havana, 13
Hong Kong, 10
Iquitos, 3 7
Madras, 1
Manaos, 5
N. Orleans, 29
Oporto, 40
Pt. Natal, 70 kgs.
Progresso, 10
Rotterdam, 25 50 bgs.
St. Kitts, 7
San Francisco, 300
Santander, 25

Paraffin Wax—
Bari, 20 bgs.
Catacolo, 10
Paris, 10 cs.
Pernambuco, 10

Phosphorus—
B. Ayres, 5 c. £42

Potashes—
Para, 10 c. £10

Potassium Bicarbonate—
Vera Cruz, 4 c. 1 q. £8

Potassium Bichromate—
Volo, 8 c. £11
Barcelona, 4 t. 19 2 q. 162

Potassium Chlorate—
Sydney, 5 t. £150
Hamburg, 15 480
Vigo, 1 33
Gothenburg, 10 30
Alexandria, 10 c. 15
Corunna, 1 31
Antwerp 10 17
Vera Cruz, 10 16
Rio de Janeiro, 10 16

Potassium Prussiate—
Genoa, 6 c. 1 q. £19

Salt—
Accra, 500 bgs. 6 cs.
Algoa Bay, 18 t. 18 c.
Ambrizette, 20
Antwerp, 95
Bakana, 20
Benin, 31 5
Berracoe, 28 2
Boston, 149 14
Calcutta, 600
Cameroons, 16 15
C. C. Castle, 18 15
Cape Palmas, 7 10
Cape Town, 22 5
Chama, 6 17
Chicago, 199
Christiania, 100
Conakry, 75 1
Copenhagen, 2,014
Egwanga, 80 7
Ghent, 100
Gibara, 11 3
Gibraltar, 50 cs.
Halifax, N.S., 99 10
Harlingen, 45
Havana, 5
Isles de Los, 7
Kingston, Jam., 10
Lagos, 80
Limon, 98
Lucea, 100
M. Video, 24
Montreal, 802 15
N. Orleans, 100
New York, 10
Old Calabar, 160 13
Pt. Natal, 201 19
Porto Alegre, 18
Rangoon, 384
Rosario, 12 10
St. John's, 100
Salt Pond, 12 10
Sapeli 9 7
Seattle 170
Sierra Leone, 102
Stockholm, 100 13
Vancouver, 260
Victoria, B. C., 45

Salt Cake—
Norrkoping, 99 t. 16 c. £134
Venice, 12 2

Saltpetre—
Ceara, 1 t. 15 c. 1 q. £42
Santos, 4 9 95

Saltpetre—
Copenhagen, 10 t. 18 c. 1 q. £30
New York, 10 16 32

Sheep Dip—
Algoa Bay, 500 dms £58
B. Ayres, 3 t. 10 c. 2 q. 140
M. Video, 2 3 116
Punta Arenas, 1 10 50
Sydney, 1 42

Soap—
Abonnema, 560 bxs.
Alexandria, 22 cs.
Amsterdam, 275
Attaboe, 30
Axim, 250
Baltimore, 25
Bakana, 250
Barbadoes, 777
Batavia, 1,700
Bathurst, 4
Benin, 10
Beufelles, 1,800
Bombay, 730 43
Bonny, 250
Boston, 55 brls.
Brisbane, 1 cs.
Calcutta, 50 75
Callao, 10 7 cks.
C. C. Castle, 224 2
Cape Gracias, 200
Cape Town, 3,356 115
Cavalla, 34
Chama, 60
Conakry, 460
Constantinople, 200
Copenhagen, 40
Corfu, 6
Curacao, 340
Demerara, 400
E. London, 1,601 10 6 bdls.
Elimina, 52
Fogo, 8
Galata, 20
Genoa, 102
Gibraltar, 30 10
Gd. Bassa 20
Gd. Bassam, 20
Grenada 150
Greytown, 100
Halifax, 300
Hamburg, 50 dms.
Havana, 1
Havre, 100
Iquitos, 200
Johannesburg, 25
Javary, 500
Kingston, Jam., 1,500
Kurrachee, 10
Lagos, 200
Las Palmas, 110
Limassol, 21
Madras, 2
Malta, 50
Melbourne, 7
Mexico, 2
Montego Bay, 100
Montreal, 30
New York, 2
Para, 200
Rotterdam, 270
St. Kitts, 250
St. Lucia, 350
St Thomas, 1
Salt Pond, 200
San Juan, 220
Sherbro, 200
Sierra Leone, 102
Sinoe, 20 17 pks.
Smyrna, 6
Tangiers, 21
Teneriffe, 1 324
Trinidad, 315
Valparaiso, 14 4 bdls.
Victoria, B. C., 60

Soda—
Santos, 1 ck.

Soda Ash—
Antwerp, 1,000 bgs.
Batavia, 29 brls.
Bilbao, 50
Bombay, 4 cks.
Boston, 32 tcs. 21
Ghent, 200
Hong Kong, 73
Kobe, 119
Melbourne, 95
New York, 64
Philadelphia, 960 91 bxs.
Piræus, 30 brls.
Rio de Janeiro, 140
Samarang, 12
Santos, 20
Smyrna, 101 150
Venice, 100 kgs. 132
Willebrock, 1,600
Zante, 300

Soda Crystals—
Algoa Bay, 3 kgs.
Constantinople, 200 brls.
Kurrachee, 201 19 cs.
New York, 140 brls.
Oporto, 25
Philadelphia, 270 bgs.
Piræus, 20

Sodium Bicarbonate—
Adelaide, 72 kgs. / 50 bgs.
Algoa Bay, 20
Amsterdam, 20 kgs.
Batavia, 10
Bombay, 130
Brindisi, 20
Brisbane, 100
Calcutta, 1,500
Cape Town, 20 bgs.
Fremantle, 50 kgs.
Galatz, 20
Genoa, 35 cks.
Melbourne, 564
Nantes, 18
Odessa, 310
Pt. Natal, 20
Rangoon, 150
Rotterdam, 40
Rouen, 125
St. John's, 2
Paris, 50
Sourabaya, 20
Toronto, 50
Trinidad, 100

Sodium Chlorate—
New York, 50 kgs.
Rotterdam, 20

Sodium Hyposulphite—
Adelaide, 12 cks.
Genoa, 20

Sodium Silicate—
Bilbao, 35 brls.

Sodium Stannate—
Calcutta, 2 cks.

Starch—
Lisbon, 2 cks

Sulphur—
Bahia, 5 t. 17 c. 3 q. £39
Boston, 50 2 213
Cartagena, N.G., 1 4 2 9
Natal, 10 brls. 7
Pernambuco, 2 17 c. 20
Portland, Me., 69 310
Trinidad, 5 14 26

Sulphuric Acid—
Iquitos, 96
Para, 4 19
Pernambuco, 17
Superphosphates—
Oporto, 50 t.
San Sebastian, 19 13 c.
Seville 22 9
Teneriffe, 10
Valencia, 382 19
Tartar Emetic—
Madras, 3
Tartaric Acid—
Brisbane, 1 c.
Vera Cruz, 1 1
Varnish—
Antwerp, 14 cks.
Hong Kong, 80
Kurrachee, 2 cs.
Melbourne, 26
Pt. Natal, 7
Seville, 1
Shanghai, 1
Taltal, 1
White Lead—
Bahia, 20 kgs.
Calcutta, 3 cks.
St. John's, 112 kgs.

MANCHESTER

Week ending November 1

Alum—
Bombay, 86 brls.
Anido Salts—
Switzerland, 90 cks.
Aniline Colours—
Belgium, 2 kgs.
Germany, 1 1 cs.
Bones—
Treport, 156 bgs.
Carbolic Acid—
Paris, 8 cks. 5 cs. 14
Castor Oil—
Holland, 4 cks.
Caustic Soda—
Alexandria, 30
Jaffa, 80
Lattakia, 10
Chemicals (*otherwise undesc*
Alexandria, 34 brls.
Antwerp, 32 kgs. 8 cs.
Mersyne, 50 brls.
Rotterdam, 10 / 2 cks.
Coal Products—
Aniline Oil
Belgium, 2
Aniline Salts
France, 2 cks.
Germany, 20
Naphthol
Switzerland, 8 cks.
Pitch
Belgium, 755 t. 7 c.
Tar Oil
Belgium, 8 tins
Germany, 4 brls.
Tar Salts
Newfairwater, 86 bgs.
Disinfectants—
Bombay, 108 cks.
Extracts—
France, 12 cks.
Gamma Acid—
Germany, 10 cks.
Glue—
Germany, 10 cks.
Holland, 24
Glycerine—
Belgium, 4
Paraffin Wax—
Mollendo, 90 bls.
Soap—
Germany, 1 bckt.
Holland 40 cs.
Soda Ash—
Jaffa, 26 brls.
Lattakia, 50
Sodium Bicarbonate—
St. Denis, 34 kgs.
Sodium Naphthionate—
Germany, 15 cks.
Switzerland, 30
Tin Oxide—
Belgium, 3 kgs.
Turpentine—
Mersyne, 1 lr

Varnish—
Adelaide, 1 tin
Bombay, 12 dms.
Whiting—
Jaffa, 5 cks.

HULL.

Week ending November 12th.

Alkali—
Abo, 38 cks.
Reval, 56 bgs.
Venice, 12 cks.
Wasa, 3
Ammonium Sulphate—
Genoa, 435 bgs.
Hamburg, 500
Leghorn, 160
Bleaching Powder—
Stettin, 54 cks.
Caustic Soda—
Reval, 255 dms.
Riga, 17
Trieste, 34
Chemicals *(otherwise undescribed)*
Abo, 10 cks.
Amsterdam, 97
Antwerp, 12 29 cs.
Bordeaux, 10
Christiania, { 22 55 pks. / 1,724 slbs.
Copenhagen, 25 btls.
Drontheim, 5 cks.
Dunkirk, 2
Genoa, 7 40
Gothenburg, 1 24 1,819
Hamburg, 45 49
Konigsberg, 4
Naples, 22
Rotterdam, 54 104
Reval, 250 bgs.
Stettin, 16 11 pks.
St. Petersburg, 4
Trieste, 2 cks.
Venice, 20
Cottonseed Oil—
Amsterdam, 473 c.
Antwerp, 867
Bordeaux, 219
Christiania, 18
Copenhagen, 104
Drontheim, 41
Dunkirk, 202
Genoa, 34
Hamburg, 783
Marseilles, 901
Rouen, 868
Rotterdam, 1,075
Stockholm, 35
Stavanger, 17
Stettin, 191
Creosote—
Bordeaux, 100 brls.
Creosote Salts—
Genoa, 356 bgs.
Dyestuffs *(otherwise undescribed)*
Boston, 8 cks.
Rotterdam, 1
Linseed Oil—
Christiania, 163 c.
Christiansand, 70
Drontheim, 35
Gothenburg, 10
Stavanger, 25
Venice, 71
Manure—
Bremen, 10 t.
Mineral White—
Genoa, 93 bgs.
Naphthaline—
Riga, 109 bgs.
Paint—
Antwerp, 21 cks. 1 dm.
Bergen, 17 1 cs.
Genoa, 2
Painters' Colours—
Amsterdam, 6 cks.
Antwerp, 19 44 dms.
Boston, 16 30 pks.
Bremen, 45
Christiania, 3
Copenhagen, 1
Drontheim, 5
Dunkirk, 1
Ghent, 60 dms.
Gothenburg, 42 110
Hamburg, 6
Harlingen, 4 900 pks.
Marseilles, 12
Naples, 97 1 cs.
Norrkoping, 21
Rouen, 5
Rotterdam, 147 1
Stockholm, 6
Stettin, 2 1
Stavanger, 6 1
St. Petersburg, 36
Venice, 12
Wasa, 38
Phosphates—
Bordeaux, 2,683 bgs.
Riga, 110
Pitch—
Antwerp, 655 t.
Genoa, 123
Salt—
Amsterdam, 90 brls.
Reval, 10 t.
Slag Meal—
Reval, 1,560 bgs.
Soap—
Amsterdam, 20 cs.
Copenhagen, 20
Starch—
Copenhagen, 3 cs.
Tallow—
Stockholm, 13 cks.
Wasa, 102
Tar—
Amsterdam, 18 brls.
Antwerp, 36
Gothenburg, 1
Rotterdam, 21
Varnish—
Amsterdam, 2 cs.
Antwerp, 1
Christiansund, 1 ck.
Naples, 1
Stettin, 22 2

GLASGOW.

Week ending November 17th.

Acetic Acid—
U.S.A., £20
Ammonium Sulphate—
Baltimore, 375 t. 17¼ c.
Hamburg, 101 3
Nantes, 5 3¼
Argols—
Canada, £20
Borax—
Melbourne, £55
Montreal, 127
Rotterdam, 32
Castor Oil—
Santos, £29
Chalk—
B. Ayres, £77
Chemicals *(otherwise undescribed)*
Rotterdam, £35
Coal Products—
Creosote Oil
Boston, £70
Christiania, 30
Pitch
Christiania, £25
Iquique, 20
Tar
Bergen, 5 t. 12 c.
Montreal, £80
Tar and Pitch
Canada, £130
Cobalt Matte—
Rotterdam, £1,027
Copperas—
Bombay, £58
Extracts—
Canada, £1,304
Farina—
Oporto, £100
Rio de Janeiro, 180
Lead Nitrate—
Montreal, £96
Paris, 200
Linseed Oil—
Canada, 6 t. 17¼ c.
Constantinople, 1 4½
Logwood—
Canada, £106
Portugal, £27 11s.
Manganese (Recovered)—
Fiume, £90
Paint—
Christiania, £36
Constantinople, £46 9s.
Mollendo, £50
Painters' Colours—
B. Ayres, £90
Calcutta, 190
Fremantle, 89
Melbourne, £41 16s.
Rotterdam, £30
Sydney, 292
U.S.A., 55
Paraffin Wax—
S. Russia, £178
Trieste, 257
Turkey, 52
Potassium Bichromate—
Melbourne, £31
Montreal, 200
Potassium Cyanide—
Melbourne, £171
Red Lead—
Bombay, £151
Sheep Dip—
B. Ayres, £108
Sodium Bichromate—
Quebec, 6 t. 7¼ c.
Starch—
Rio de Janeiro, £385
Sulphur—
Calcutta, £40 10s.
Varnish—
Trieste, £20 15s.
White Lead—
Sydney, £66

TYNE.

Week ending November 12th.

Alkali—
Amsterdam, 20 t. 17 c.
Bergen, 6 5
Christiania, 1
Hamburg, 5 9
Alum—
Rotterdam, 15 t. 1 c.
Ammonium Carbonate—
Christiania, 11 c.
Ammonium Sulphate—
Valencia, 340 t.
Antimony—
Hamburg, 5 t.
Rotterdam, 5
Arsenic—
Abo, 19 c.
Copenhagen, 1 t. 3
Barium—
Messina, 5 t. 3 c.
Barium Carbonate—
Hamburg, 227 t. 10 c.
Rouen, 23 23
Bleaching Powder—
Abo, 175 t. 10 c.
Amsterdam, 46 16
Antwerp, 71 17
Arendal, 2 18
Bergen, 5 3
Christiania, 30 6
Copenhagen, 28 11
Drontheim, 9 19
Hamburg, 7 4
Rotterdam, 38 17
Caustic Soda—
Abo, 3 t. 10 c.
Amsterdam, 12 17
Bergen, 1 9
Christiania, 2 18
Copenhagen, 5 2
Helsingfors, 10 1
Leghorn, 32 17
Messina, 10 3
Rotterdam, 12
Singapore, 4 1
Wasa, 5 18
Colours—
Messina, 2 c.
Sebastopol, 8
Copperas—
Bergen, 1 t. 1 c.
Creosote Oil—
Rouen, 2 t. 16 c.
Extracts—
Stavanger, 6 c.
Fluor Spar—
Copenhagen, 5 t.
Iron Sulphate—
Drontheim, 1 t. 1 c.
Litharge—
Christiania, 12 c.
Rotterdam, 10
Magnesia—
Antwerp, 9 t. 2 c.
Batoum, 9
Hamburg, 15
Manganese—
Rouen, 1 t. 7 c.
Paint—
Antwerp, 2 t. 8 c.
Nagasaki, 6
Yokohama, 16 10
Painters' Colours—
Rotterdam, 8 c.
Pitch—
Rouen, 40
Slag—
Pomaron, 5 t.
Soap—
Christiania, 2 c.
Soda—
Abo, 17 t. 2 c.
Amsterdam, 53 17
Christiania, 1 1
Randers, 15 2
Rotterdam, 19 19
Soda Ash—
Antwerp, 3 t. 9 c.
Bergen, 10
Hango, 6 17
Odessa, 7 4
Wyborg, 25 5
Sodium Sulphate—
Copenhagen, 105 t. 18 c.
Helsingfors, 1 8
Sulphur—
Arendal, 200 t.
Wyborg, 2
Superphosphates—
Valencia, 140 t.
Tallow—
Helsingfors, 9 t. 12 c.
Messina, 7 4
White Lead—
Abo, 18 c.
Copenhagen, 1 t. 4

GOOLE.

Week ending November 9th.

Alkali—
Rotterdam, 1 ck.
Caoutchouc—
Boulogne, 22 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 12 cks.
Rotterdam, 1
Coal Products *(otherwise undes.)—*
Amsterdam, 131 cks.
Antwerp, 2 1 cs.
Boulogne, 48
Dyestuffs *(otherwise undescribed)*
Ghent, 36 bgs.
Hamburg, 1 ck.
Manure—
Dunkirk, 250 bgs.
Ghent, 129
Hamburg, 50
Painters' Colours—
Amsterdam, 202 bgs.
Antwerp, 3 cks.
Boulogne, 1 tin
Hamburg, 28 cs.
Rotterdam, 24
Pitch—
Antwerp, 901 t.

GRIMSBY.

Week ending November 12th.

Alkali—
Hamburg, 21 cs.
Port au Prince, 660 dms.
Chemicals *(otherwise unaescribed)*
Dieppe, 3 cs.
Coal Products *(otherwise undes.)—*
Dieppe, 111 brls. 1 cs.
Hamburg, 2 cks. 31 4 btls.
Dyestuffs *(otherwise undescribed)*
Dieppe, { 10 kgs. / 1 ck.
Painters' Colours—
Antwerp, { 2 kgs. / 14 cks. 8 cs. 7 pks.
Hamburg, 3 brls.
Rotterdam, { 4 kgs. / 1 ck.
Pitch—
Antwerp, 56 t.
Stearine—
Helsingborg, 5 brls.

PRICES CURRENT. WEDNESDAY, NOV. 23, 189

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U K. The price in different localities may t

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	17	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	0	0
,, ,, (grey) Hull .. .. ,,	10	0	0
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8½
,, 50/90 ,, ... ,,	0	0	8½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1½
Copper .. .. per ton	56	1	3
,, Sulphate .. .. ,,	18	10	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	26	10	0
,, (distilled S.G. 1250°) .. .. ,,	45	0	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	12	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	17	10	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	
,, ,, (grey) (ex ship) .. .. ,,	8	0	
Magnesium (ribbon and wire) .. .. per oz.	0	2	
,, Chloride (ex ship) .. .. per ton	2	10	
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton	9	10	
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	
Manganese, Sulphate .. .. ,,	17	0	
,, Borate .. .. per cwt.	2	2	
,, Ore, 70% .. .. per ton	3	10	
Methylated Spirit, 61° O.P .. .. per gallon	0	2	
Naphtha (Wood), Solvent .. .. ,,	0	2	
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	
Oils:—			
Cotton-seed .. .. per ton	15	15	
Linseed .. .. ,,	18	0	
Stearine .. .. ,,	25	0	
Phosphorus (Yellow) .. .. per lb.	0	1	
,, (red) .. .. ,,	0	2	
Potassium Bichromate .. .. nett ,,	0	0	
,, Carbonate, 90% (ex ship) .. .. .. per ton	14	15	
,, Chlorate .. .. per lb.	0	0	
,, Cyanide, 98 % .. .. ,,	0	1	
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	5	
,, ,, ,, 75/80 % .. .. ,,	17	15	
,, Potash Hydrate Liquid 50 % .. .. .. ,,	10	15	
,, Nitrate (refined) .. .. ,,	19	15	
,, Permanganate .. .. per cwt.	2	15	
,, Prussiate Yellow .. .. per lb.	0	0	
,, Sulphate, 90 % (ex ship) .. .. per ton	9	15	
,, Muriate, 80 % ,, ... ,,	8	15	
Silver (metal) .. .. per oz.	0	2	
Sodium (metal) .. .. per lb.	0	2	
,, Carb. (refined Soda-ash) 48 % .. nett per ton f.o.r. w'ks.	4	15	
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, f.o.r. w'ks.	4	5	
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, f.o.r. w'ks.	4	0	
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, f.o.r. w'ks.	4	0	
,, ,, (Soda Crystals) .. .. .. ,, ,, f.o.r. w'ks.	2	7	
,, Acetate (ex-ship) .. .. ,,	12	5	
,, Arseniate, 45 % .. .. ,,	13	0	
,, Chlorate .. .. per lb.	0	0	
,, Borate (Borax) .. .. nett per ton	14	10	
,, Bichromate .. .. per lb.	0	0	
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton 10 ton lots	7	15	
,, ,, (74 % Caustic Soda) ,, ,, ,, 10 ton lots	7	10	
,, ,, (70 % Caustic Soda) ,, ,, ,, 10 ton lots	7	0	
,, ,, (60 % Caustic Soda) .. ,, ,, 10 ton lots	6	0	
,, ,, (pure liquor 90° Tw.) .. ,, ,, 10 ton lots	3	15	
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	
,, Bicarbonate .. .. ,,	6	10	
,, Hyposulphite .. .. ,,	5	5	
,, Manganate, 25 % .. .. ,,	15	0	
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	
,, Nitrite, 98 % .. .. per ton	25	0	
,, Phosphate .. .. ,,	10	0	
,, Prussiate .. .. per lb.	0	0	
,, Silicate (glass) .. .. per ton	4	10	
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	
,, Stannate, 40 % .. .. per cwt.	2	15	
,, Sulphate (Salt-cake) .. .. per ton	1	6	
,, ,, (Glauber's Salts .. .. .. ,,	1	7	
,, Sulphide .. .. ,,	7	5	
,, Sulphite .. .. ,,	4	15	
Strontium Hydrate, 100 % .. .. ,,	10	15	
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	
,, Barium, 95 % .. .. ,,	0	0	
,, Potassium .. .. ,,	0	0	
Sulphur (Flowers) .. .. per ton	7	7	
,, (Roll Brimstone) .. .. ,,	6	3	
,, Brimstone: Best quality .. .. ,,	4	12	
Superphosphate of Lime (26 %) .. .. ,,	2	10	
Tallow .. .. ,,	23	10	
Tin Crystals .. .. per lb.	0	0	
,, English Ingots .. .. per ton	85	0	
Zinc (Spelter) .. .. ,,	24	12	
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	
,, Sulphate, Crystal .. .. ,,	6	7	

THE

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CURRENT TOPICS.

COMMERCIAL EDUCATION.

OF late we seem to have experienced a change—for the better we hope—in educational feeling. Technical education, which was so much be-praised, has latterly been superseded in public favour by a *penchant* for commercial education.

There is not the slightest doubt that in the minds of the majority this term conveys something quite different from its true meaning; but we have reason to hope that it will not suffer from misrepresentation to the same extent as technical education. Sir John Gorst is a fully qualified authority on this subject, and he holds hopeful views for the future.

It was certainly very opportune that Consul Powell's report on German commercial education should make its appearance just at this time. We summarised this report some weeks back, and cannot commend it too strongly to all who have occasion to adjudicate upon educational matters.

Slowly but surely our educational bodies are awaking to the fact that we stand in greatest need of what may be termed a "modernised" general education for all classes and better means for fostering higher education among the middle classes.

It is possible to specialise too much and too early in the education of lads, and although Germany, is in a way, the home of specialism, yet in adopting the best portions of their system we must not forget that even in that country the college student who is an absolute specialist is looked down upon. The majority take up some subject which is apparently wholly foreign to their future calling; so that the student who is devoting his chief energies to chemistry, physics, or engineering also studies to proficiency music, literature, art, history, or languages, even to Hebrew and Sanscript. The late Dr. Alder Wright certainly formed an excellent model for every budding chemist and physicist, and yet apart from his undoubted scientific and technological attainments he was a cultured musician and an accomplished Greek and Hebrew scholar. This highly desired end cannot be attained by any system of education which endeavours by a multiplicity of institutes and science classes to provide for the technical requirements of every district and locality. As Sir J. Gorst urges, a central authority to co-ordinate all endeavours to extend and improve our educational facilities is essential to success. This need not entail the suppression of local individuality, but it will avoid overlapping and waste of money. He is confident that a conference of the leaders connected with bodies interested in higher education would result in a solution of all existing difficulties, both locally and generally. We think with him. The unification of the systems of "modernising" school *curricula* would enable technical schools to do far more good, by supplying them

with better raw material to work upon. At present half their energies are wasted through this raw material being altogether too "raw."

WORKMEN'S COMPENSATION.

White lead is a constant source of trouble to manufacturers and users on account of its power of producing lead poisoning. The manufacturers have stringent preventive regulations in force, but we do not know of any like restrictions which are binding upon users. The paint grinder and compounder comes, we believe, under the special rules for dangerous occupations; but in any case we do not know of a clause which provides compensation for those who still fall victims to lead poisoning in spite of all precautionary measures.

An instructive test case is reported elsewhere in this issue, which shows that in the eyes of the law the contraction of lead poisoning in the execution of employment as a painter is not an accident under the Compensation Act. This may be hard on the particular individual; but if compensation was to be given under this Act to those who fall ill, even in white lead factories, employers would be besieged with applicants for work, who were anxious to become employed, meet with a lead-poisoning "accident," and claim compensation. And if the principle had been extended to painters and all other users of white lead paints there is no knowing where matters might have ended. It is a point which certainly wants carrying to a definite and final decision.

PROPOSED UTILISATION OF LOCH LEVEN.

MORE WATER POWER FOR ELECTRICITY.

AMONG the more important proposals to come before Parliament next session in the form of private Bills, is one from Scotland, promoted by a syndicate, to authorise a scheme for conveying the waters of Loch Ericht, Inverness-shire, to the top of Loch Leven, on the West Coast of Scotland, at a point about seven miles above Ballachulish The object is to secure at that point sufficient water power to generate about

FORTY THOUSAND ELECTRICAL HORSE POWER.

This it is proposed to accomplish by means of a fall of 1,100ft. The scheme is estimated to cost between £1,000 000 and £1,500,000., and when it has been carried out there is every reason to believe that a number of extensive factories in connection with chemical industries will be established at Loch Leven. Of late years it has been found that, owing to the abundance of water power available in America and Germany for the purpose of generating electricity at a very cheap rate, the British chemical manufacturers have felt the pinch of foreign competition. One great advantage of the Loch Leven site is that vessels drawing fourteen feet of water can get up to the top of the loch at high tide, so that the raw material required for the factories, as well as the latter's finished produce, could be conveyed by water instead of rail, and this, as is well known, means cheaper rates. The proposed scheme will, it is believed, cause certain large chemical manufacturers, who had been contemplating the transference of their works from this country to the United States, to revise their plans. As to the Parliamentary prospects of the Bill, it is considered probable that the riparian owners, especially those on the Tay, will offer some opposition, as the water proposed to be impounded flows into the Tay valley, but the promoters are confident they can overcome this difficulty by raising the level of the ground in one of the contributing valleys, so as to intercept the storm water, by which means the engineers say that they will be able to give a flow of water during the dry season twice as great as that which now enters the Tay, whilst they will also do much to mitigate the damage annually caused to the banks by the flooding in the wet season. It may be added that the particular area affected by the scheme is within the chief rainbelt in Scotland.

CHANGE OF ADDRESS.—Messrs. John J. Griffin and Sons have recently removed from their premises at 22, Garrick-street, Covent Garden, into buildings which have been specially constructed for their work at 20-26, Sardinia-street, Lincoln's Inn Fields. This has been rendered necessary owing to increasing work, which has demanded larger and more suitable buildings.

THE RUSSIAN PLATINUM INDUSTRY.

THE METAL GETTING SCARCER.

THE demand for platinum is advancing owing to its increased scientific and other apparatus and processes, such as cru electric incandescent lamps, vacuum tubes, batteries, photog printing and toning processes, etc.; but the supply is still a meag Only recently the price of the metal went up, although it alread at a pretty high figure.

Practically the whole of the world's supply comes from Russia. connection it is interesting to learn that nearly all the im platinum mines of that country have already passed into the h foreigners, and that by the sale of these mines Russia has advantages which she might acquire from the platinum industry

According to a St. Petersburg newspaper, there is a group o concentrated in the Verkhotursk district of the Government of numbering about 70, of which 40 are being worked. In the co last year several of these passed into the hands of foreigners, in a Paris syndicate having a capital of several million francs, a out of the existing seven great platinum enterprises in the Ur now reported to have been purchased by foreigners. There is be really no demand in Russia for the metal, and when R owned the mines they exported the ore in the rough state to be in Germany and other countries.

The production of the mines in the Verkhotursk district am last year to about six tons. This may not seem a large quantity we consider that platinum is the heaviest of the metals, except still rarer metal, irridium; but it must be borne in mind tha only be compared with gold in value. The price per ton was est in connection with the purchase of some of these mines by th syndicate already referred to, at from £160,000. to £192,000 When it is considered that no new veins of the metal have b covered in Russia for a long time, and that the present veins wi be exhausted, it becomes evident that the Russians have important industry, and the only one which enjoyed a monopol world's supply It is also evident that the price of the metal still further enhanced as it becomes rarer, unless some fresh sou supply can be discovered in this or other parts of the world.

POISONOUS OVERCOATS —An extraordinary occurrence was r at the last meeting of the Public Works Committee of the Birm City Council. The men employed to clear the streets of sno supplied with overcoats which became soaked by the sleet a As a result, a large number of the men are suffering from p hands and arms, and have been treated at the hospital. Si Smith, chairman of the Committee, stated that about 60 of the ation employés have up to the present complained of the effects chemical dressings of the coats and overalls, but it is not at all t that other cases will be reported. Dr. Hill, medical officer of has analysed the cloth, and he reports that it contains chloride The garments, to the number of 300, have been called in. the men are seriously harmed. They are, in the majority c suffering from a skin eruption about the arms and hands an caused by the zinc irritant.

FROM THE PEOPLE'S PALACE TO THE UNIVERSITY.— rather remarkable elections to scholarships at Oxford hav announced within the last six months, which seem to point to so of a revolution in our educational system. On June 20th, T. S. aged 17, was elected to a natural science postmastership at College, Oxford; on October 17th, Charles Everitt, aged 16, was to a demyship at Magdalen College, Oxford; and on Novemb Arthur M. Peake, aged 17, was elected to a scholarship at Christ Oxford. All the scholarships were of the value of £80. per These three boys were all from the East London Technical People's Palace. This institution situated in the heart of the Eas London, consists of a day school, higher day classes, and evening and is chiefly supported by the Drapers' Company. The day which contains about 380 boys between the ages of 12 and 16, is filled by pupils from public elementary schools, most of whose are of the artisan class. About half pay the school fee of 1s. pe and the remainder hold small scholarships awarded by the Company. The higher day classes enable the cleverer boys to c their studies by scholarships given by the Drapers' Company additional years. The first two boys successful at Oxford were trained in the day school and day classes, while the third joined classes about a year and a half ago, having previously atten Tottenham Grammar School. The majority of the boys attend school become engineers, chemists, and artisans, but it is a rem feature of the times that out of seven natural science scho awarded at Oxford in the last six months three should have boys from a school of this kind.

The Patent List.

ist is compiled from Official sources in the Manchester l Laboratory, under the immediate supervision of . Davis and Alfred R. Davis, who report professionally va'ue of Chemical Patents.

LICATIONS FOR ENGLISH LETTERS PATENT.

ure of Bisulphite of Soda. F. M. E. Basse and G. Faure. 23,978. ber 14.

oof and Acid-proof Compounds. J. H W. Stringfel'ow. 23,981. ber 14.

g Carbide of Calcium. S. T. Richardson and R. Price 24,157. ber 16.

Tallow, Fats, Oils, etc. H. Cheetham. 24 200. November 16

White Lead. The East Ferry-road Engineering Works Company, Ltd., Tuckett, L. Lancaster and W. W. and R. Johnson & Sons, Ltd., and Johnson. 24 211. November 16.

ure of Zinc. V. Beaurang. 24,259. November 17.

ic Extraction of Zinc from Ores. J. C. Fell. 24 307. Nov. 17.

Fertiliser. F. M. Mooney, A. Dickson. 24,321. November 18.

ure of Dyesoap Powder. J. B. Koenig. 24,373. November 18.

ure of Resin Soap C. Dreher. 24,375. November 18.

Acid-proof Materials. E. W. Engels. 24,378. November 18.

Composition. W. P. Thompson 24,402. November 18.

ients in Gas Producers. W. R. Ormandy. 24,408. November 18.

RACTS OF LATEST COMPLETE SPECIFICATIONS.

bstracts are specially prepared for the Chemical Trade Journal, RIGHTS *of publication are* RESERVED. *This is the earliest bstracts of Chemical and allied patents accessible to the public.*

ients in or Relating to the Manufacture of Calcium Carbide. ick, 1, Carrill-grove, Levenshulme, Manchester, and W. A. Thornton, House, Market-place, Wetherby. Eng. Pat. 29,008. December 8,

tent has reference to grinding and mixing machinery for pre- charge of lime and coke. The two are mixed in any desired , and passed through a crusher into a disintegrator beneath. ure is raised by a bucket elevator to a horizontal conveyor is it to the electric furnaces The fine dust is separated by a on. There are three figures.

oved Method or Process of Preparing Oxalic Acid and tes. Dr M. Goldschmidt, 1, Carmerstrasse, Charlottenburg, Germany. at. 26,172. November 10, 1897.

formate, produced according to patent 17,066/95 (*C.T.J.*, p. 97) is mixed with anhydrous sodium carbonate in the pro- 4 to 5 and heated in a bath of lead to 400° C. The end of on is indicated by the evolution of hydrogen ceasing. The product is of excellent colour It is leached with water at hich dissolves the soda and leaves practically pure oxalate. solution is evaporated and used again.

ients in the Manufacture of Paints, Anti-corrosive Com- ns and Compositions for like Uses. C. J Grist, 20, Grace- street London. Eng. Pat. 26,800. November 16, 1897.

ite, hair, or other fibre in a separated form is dipped into linseed has been partially oxidized by treating with litharge at 400° excess of oil is removed in a centrifugal, the fibres teazed placed on wire netting to be subjected to a current of warm oil becomes thoroughly oxidized. This is repeated until the coated with oxidized oil. They are then crushed between rm a homogeneous mixture. This is let down with spirit to ke consistency, and a small percentage of arsenic added. ethods of compounding special paints and compositions are

ients in the Manufacture of Matches. Dr C. Kastner, 12, Haupt- Vienna XVIII., and A. Swoboda, 21, Ottakringerstrasse Vienna XVI. at. 30,546. December 24, 1897.

cut into suitable lengths are tipped with a paste which fires . Other suitable vegetable haulms may be used . Even so-called rice straw can be utilised.

Compound for making a Substitute for Linseed Oil Body for , Printing Ink, Floor-cloth Making, and the like. S. Banner, akerley-street, Liverpool. Eng. Pat. 29,728. Dec. 15, 1897.

ony is dissolved in a suitable solvent, and saponified in whole th caustic soda or silicate of soda or potash. Lime, in the form, may be compounded with the colophony, and used in re. The preparation of the lime and colophony compound is in patent 11,805/87.

THE BOROUGH POLYTECHNIC.

SINCE the opening of the Borough Polytechnic, in the first instance rather more that six years ago, its work has been attended with so much success that on two occasions the premises have had to be extended. The alterations carried out in 1894 involved the expenditure of some four thousand pounds, and now further additions and improvements have been effected at a cost of considerably more than eleven thousand pounds. This latter sum does not, however, include the amount required for furniture and fittings comprised in this last scheme of extension.

The new buildings are to be formally opened on the 8th of December, and consist of a well-equipped gymnasium, about 80ft. by 40ft , four workshops for wheelwrights, boot and shoe makers, printers and book-binders respectively, a physics laboratory and lecture room, while there is also a school of cookery, and a men's club and refreshment room.

Since the opening of the Institute in 1892 there have been over 21,000 class entries, the last session alone the students numbering 3,080. The trustees of St. Olave and St. John United Churches have contributed £3,000. towards these extensions. By letting seats on the occasion of the Jubilee procession last year, the governing body netted a similar sum ; the central governing body have promised £1,500 , and further subscriptions amounting to £2,767. have been collected, so that there is at the present time a deficit of about £2,000. A private inspection of the new buildings was made on Monday afternoon last, from which the foregoing information has been gathered.

SUGAR-BEET GROWING IN SHROPSHIRE.

THE results of the analysis of the sample of sugar-beet grown in Shropshire during the past season in competition for prizes offered by Lord Windsor have just come to hand. The analyst, Mr. Alexander Watt, F.I.C , F.C.S., states :—" Taking into consideration the weight of the roots, the amount of sugar contained in them, and the degree of purity of their juice, I consider that the four best lots stand in the following order of merit : - 1, Mr, W. Gibbs, Upton Magna ; 2, Mr J. Powell, Shawbury ; and equal 3rd, Mr. L. Danford, Bromfield, and Mr. J. Kent, Baschurch. All the samples were grown from German seed. The largest root received weighed 2,830 grammes, without its leaves, and was sent by Mr. J. Kent. The analyst states that the samples which were awarded the first prize were, in weight, above the year's standard of German-grown roots, the quantity of dry matter was less, the specific gravity a little less, the sugar in 100 parts of juice ·72 per cent. less, the non-saccharine matter less, the quotient of purity 1 per cent. higher, and the percentage of sugar in the roots themselves was 13·70, as compared with 14 50 for German grown. In every respect roots grown from German seed were superior to those grown from French seed. The roots were heavier than those grown in Germany, and their juice a little lighter, the juice from German seed having, however, a higher degree of purity, and that from French seeds a slightly lower degree than the juice from roots grown in Germany. 7·3 tons of the roots grown from the German seed, or 7·5 tons from French seed, would be required to yield one ton of sugar, against 6·9 tons of German growth. All the roots were of good shape, an important factor to the sugar manufacturer. The roots were heavier than the average of those grown by Colonel Milward, M.P., the proportion of dry matter nearly alike, the specific gravity about the same, the proportion of sugar to juice slightly lower, the proportion of non-saccharine matter a little higher, the quotient of purity 3 per cent. lower, and the proportion of sugar to root 2 per cent lower.

THE BACTERIAL TREATMENT OF INDUSTRIAL SEWAGE.—The Rivers Committee of the Manchester Corporation met on Monday, with Alderman Sir Bosdin T. Leech in the chair. At the conclusion of the formal business of the Committee the Chairman intimated that in a short time the three experts appointed by the Council would present an interim report on the working of the experimental filters at Davyhulme. So far as can be learned it is probable that the report will be favourable to the general adoption of the biological method of sewage treatment. A member of the Committee also gave an interesting account of a visit he had recently paid to the Leeds Sewage works. The Leeds Corporation have for the last fourteen months been carrying on a series of experiments in the purification of sewage by bacterial methods. These are being conducted under the direct supervision of Mr. Dibdin, the eminent sewage expert, and it was reported that they had proved highly satisfactory. In view of the fact that the sewage of Leeds is of a character somewhat similar to that of Manchester, this result is confirmatory of the Davyhulme experiments The Rivers' Committee visited the Davyhulme works the same afternoon for the purpose of viewing the operation of the Exeter septic tank.

THE AMERICAN PORTLAND CEMENT INDUSTRY.

By Robert W. Lesley.

FIRST class cement, the natural, such as the Rosendale, Lehigh and Cumberland cements, was first made by Joseph Parker in 1796, who discovered what he called "Roman cement," based upon the calcination at low temperatures of the nodules found in the septaria geological formation in England. This was practically the first cement of commerce, and gave excellent results. Subsequent to the discoveries by Smeaton, General Sir William Paisley went into an exhaustive series of chemical and other tests to determine how artificial cements could be produced which would correspond to the higher grades of hydraulic limestones described by Smeaton and the Roman cement which was then commanding the market. Contemporaneous with him and working in the same scientific field was Vicat, a French engineer, who conducted investigations of the same general character, and, in his book on hydraulic limestones and cements, describes his many experiments which led to the scientific development of a Portland cement artificially made by calcining mixtures of chalk and clays at high temperatures to incipient vitrifaction.

While these experiments were going on, Joseph Aspdin, a bricklayer or plasterer, took out a patent in England in 1824 on a high grade artificial cement, and, at great personal deprivation, succeeded in manufacturing it on a commercial scale by combining English chalks with clay from the river beds, drying the mixed paste, and after calcining at high heat the material thus produced, grinding it to powder. This cement, which was the first Portland cement in the market, obtained its name from its resemblance when it became stone to the celebrated Portland stone, one of the leading building materials in England.

The growth of the natural or Roman cement industry in England was more rapid than that of the Portland cement, and in the early days of Portland cement that article was sold at prices considerably lower than those of the Roman cement manufactured by Parker and his successors in the business. It was not until many years after Smeaton's discovery that there was much growth in the Portland cement industry. A few works were started in England, and a few more were started on the Continent by friends or relatives of Aspdin, but the demand was very slight, and there was a doubt in the minds of engineers as to the character of the material. Along in 1850, when the question of building the London drainage works came up, John Grant, the engineer, decided to use Portland cement in its construction, and his two papers, published by the Institute of Civil Engineers, form the first scientific literature on the subject of cement testing, and were the first to put Portland cement to the front as a material upon which engineers could rely to the fullest extent.

In America we make the natural cements similar to the Roman cement of Parker, and also the Portland cement of Aspdin. The laminated cement rock of the Lehigh region from which, among others, natural cement is made, is calcined in open kilns, like lime kilns, a moderate heat only being used. The product is then ground, put into barrels, and is ready for shipment.

The rocks used in the manufacture of Portland cement are very similar to those from which natural cement is made. The various layers in the natural rock may vary in size or stratification, so that the lime, alumina and silica may not be in position to combine under heat, or there may be too much of one ingredient, or not enough of the others in close proximity to each other. In making Portland cement these rocks, properly proportioned, are accordingly ground to an impalpable powder, the natural rock being broken down and the laminæ distributed in many small grains. This powder is then mixed with water, and is made into a new stone in the shape of the brick, or block, in which all the small grains formerly composing the laminæ of the original rock, are distributed and brought into a close mechanical juxtaposition to each other. The new rock thus made is put into kilns with layers of coke, and is then calcined at temperatures from 1,600 degs. to 1,800 degs. The clinker, as it comes from the kiln, is then crushed and ground to an impalpable powder, which is the Portland cement of commerce. Portland cement may be made from other materials, such as chalk and clay, limestone and clay, cement rock and limestone and marls and clays. In every case the principle is the same, the breaking down and the redistributing of the materials so that the fine particles may be in close mechanical union when subjected to the heat of the kiln.

The first branch of the industry to develop in this country was that of natural cement, and its inception was largely because "necessity is the mother of invention." The first large public works built in this country were the canals, and the most necessary thing to build a canal was mortar that would hold the stones together at the locks, or walls, under water. Consequently, wherever canals were to be built, there was a search for cement rocks, and all the earliest works in the U.S.A. were established on the lines of canals. From this same fact grew the early package used in shipping cement in this country, the barrel, which was the package best adapted to water transportation, and it took many years, even since the railroads came, to overcome the prejudice for this form of package and to substitute the paper or duck bag for the barrel.

The growth of the natural cement industry has been very rapid, having increased from 3,000,000 barrels in 1882, to about 8,500,000 barrels in 1895.

The first American Portland cement plant was that of the Coplay Cement Company, of which Mr. David O. Saylor, of Allentown, was the president. This plant was established about 1865, and made natural cement of excellent quality. Mr. Saylor, who was a man of indomitable energy and great ability, made up his mind in the early seventies that he could make Portland cement in the States, and his first experiments are most interesting. He knew that by burning to incipient vitrifaction the rocks of his quarry he could make a cement that at short periods showed tensile strains equal to the imported Portland, but he found this cement would crumble away as time went on, owing to the variation in the raw material. By sheer force of his native ability, Mr. Saylor studied out and successfully applied to the Lehigh rocks the principle above mentioned as governing the production of Portland cement, though he was dealing with a material never before used for the purpose. The process was that which I have just described, and is still in use in some of the largest works in the Lehigh district. Mr. Saylor's work was materially aided by Mr. John W. Eckert, a graduate of the Lehigh University, who became first the chemist and afterward the superintendent of the Coplay Cement Company, Mr. Saylor's concern at Coplay Station, which he subsequently left to join in the establishment of the American Cement Company.

While this experiment was being carried on to success in the Lehigh region, and the foundations were being laid for the large industry that now exists, a small works was erected near Kalamazoo, Mich., in 1872. Owing to the character of the material and the high cost of labour and fuel, this works made cement which was too expensive commercially and did not succeed. Early in 1875 works were started by Mr. Shinn at Wampun, Pa., near Pittsburg, using limestone and clay. These works are still going, though they have not been very materially increased since their inception. At South Bend, Ind., Thomas Millen, an Englishman, found a white marl and a blue clay which resemble in composition, though not quite in form, the materials used for cement making in England. He started a small works there in 1877, and the plant is still running, though in a moderate way. Mr. Millen later transferred his field of operations to New York State. The Rockland, Me., lime is well known as one of the best and purest in the States, and it was but natural that the Portland cement industry should seek a lodgment in that field. The Cobb Lime Company, an important concern there, started works in 1879, but the product was too dear for commercial success and they were closed down. For similar causes a similar fate overtook the National Cement Company, which was established by Mr. S. D. Coykendall and others on the Hudson, in the well-known natural Rosendale district. Thus it may be seen that out of the six original works the Statesprior to 1881, three were failures, and certainly the industry, with this percentage of loss, did not offer very encouraging outlook to the investor. At this period, the foreign Portland had the market exclusively, and there seemed little likelihood of growth for the American industry.

Patents were necessary to enlist capital in the earlier enterprises, and many of the earlier works were founded on them. The great difficulty in all the American enterprises seemed to be the cost of getting the raw material into powder, then into paste, then into bricks or blocks, and then into the kiln with a sufficient economy. About 1884 and 1885 patents were taken out by Messrs. James M. Willcox, E. J. Smedt and Robert W. Lesley for the purpose of mixing liquid hydrocarbons with the paste. In this way a "slurry" was made which, when compressed into balls or eggs, could be at once put into the kilns, and thus many of the intermediate steps of drying, etc., were dispensed with, and much labour and money saved. These processes, which were used in the works started by the American Cement Company at Egpyt, Lehigh County, Pa., under the management of John W. Eckert and Robert W. Lesley, were based upon the use of the by-products of the manufacture of coal gas, but with the introduction of water gas and the consequent advance in the price of coal tar, the processes were abandoned and other methods adopted. But the enterprise proved successful, and the Company now controls five large works, four at Egypt, Lehigh County, Pa., and one near Syracuse, N. Y., and is one of the largest producers of Portland cement in the country. While these methods of saving the intermediate processes of drying were being used, other inventions by Mathey, Navarro and Ransome in the same direction gave rise to the establishment of the Atlas Portland Cement Company, which has two large works in the Lehigh region, and is another great producer of cement. These processes, based originally on the calcination of the crushed raw rock by oil in revolving kilns, were at first unsuccessful, the cement proving unreliable for the same reason that gave Saylor so much trouble originally. Subsequently, however, improvements were made whereby the material was ground

ıpalpable powder and slightly moistened before being run he kiln, and cement made in this way has proved successful, de in large quantities in this country.

bove gives a brief account of the development in America nception to its present period of successful manufacture, and, , the industry owes much to the application of American and American processes to a European industry. This leads cussion of the methods in use in America and in Europe.

THE HANDLING OF THE RAW MATERIALS.

ials.—Portland Cement in England and in Germany, which wo largest producing countries, may broadly be stated to be ıct of an intimate admixture of chalks and clays or marls and he same condition may be stated to govern the industry in ıs most of the large works in that country use material of ade. Both of these materials containing large percentages of ıic water, as well as water in mechanical combination, are what is known as the wet way; by this is meant, that the f the composition or slurry out of which the Portland cement ed, is by the mixing of the two ingredients with a consider- on of water, and in a large number of the European works ntage of water is so large as to admit of the flowing of the from place to place in the plant. The production of this nixture of the raw materials in Europe is conducted in pug- urry-mills of various models, in some cases rollers running over re of clay and chalk and reducing the material to uniform con- or in other cases the material being run through millstones in dition. The material thus reduced was, under the old-time n Europe, run into immense settling basins or vats, covering ases many acres, where it was allowed to settle, and where, ration and decantation, it became a mud, showing, after n its surface, cracks such as are seen in disused brickyards, or oms where the water has been drawn away. This material,) into lumps according to the cracks formed upon the surface, ght to drying floors, and, after some few days of drying, was kiln with coke and burned to incipient vitrifaction, producing hich was subsequently ground to powder and produced the cement of commerce. Of late years the better practice, which nstituted in some of the French and better German works, is ntimately grind the raw materials together, and while in a to run them into what are called *bassins de dosage*, where a supply can be held on hand to enable a careful examination to of the chemical constituents of the slurry, and from which material is run into other settling basins, whence it is taken floors, or is pumped into tunnels or on to drying floors art of the kilns themselves. As contradistinguished from these which in olden times took several months and under more rocesses in Europe occupy several days and in some cases eeks, the American practice has been to use dry materials, e hydraulic cement, water limestones, and lime-rocks of the istrict, and to treat the material in practically a dry way, it together in the form of powder, which is analysed, and wder is subsequently made into bricks by machinery or by tated in the historical portion of this article. Other works ith rocks such as are found at Glen Falls, N.Y., and in the y district near Phillipsburg, use practically the same methods, s dealing with marls and clays or wet materials are beginning m directly after mixing into *bas ins de dosage* and thence into kilns. Thus American practice is enabling mills to manu- ment by greater economies in handling the raw materials as and most important step.

—Following, therefore, upon this step, the next step to be l in American practice is that of the kilns, the principal dis- nerican kiln in its use being the rotary kiln, already men- d which is an adaptation of the English Ransome kiln. This ln was never successfully used in England, and it remained nericans to make a commercial success of it. Many of the g the dry raw materials, however, are also enabled to success- competition by the use of the dome kilns, such as are used f the European works, while others use what are known as h and Schoefer continuous kilns, both of which are of German l, while affording economy in coal, seem to entail larger t than the use of the dome kilns. Others, as above stated, rock of the Lehigh district and also the marls and clays of nd Michigan districts, have found means of introducing the ials finely ground, into rotary kilns, either in a dry or wet

In its course from the receiving end of the kiln the damp the slurry is relieved by the heat produced by either oil or coal from its moisture and carbonic acid gas, until finally g power of the kiln further along in its course, clinkers it, e discharging end of the kiln the material comes out in the all nodules of various sizes and shape and in a clinkered is does away with the making of bricks and other forms for the kilns in the case of wet raw material. The forms of these various kilns are very fully described in a new book by Dr. Schoch on the manufacture of cement, published under the auspices of the German Society of Cement manufacturers, and in a new book by Candlot, Paris, 1897, a thorough description of which burning apparatus would involve considerable illustration and technical explanation.

Mills and Crushing Machinery—Another material point of the difference between the American and European methods, and one to which the very great advance in the product of this country is due, is in the mechanical apparatus for grinding. European practice has been very largely based upon precedents. The precedents for mills were water-power, and the line shaft for driving mills was usually connected with a water-wheel, and mills were in turn connected with the line shaft by bevels or other forms of cog gearing. Thus the mills in many European works are situated in the second storey of the buildings, losing considerable space, and the grinding apparatus in use are the well-known forms of millstones, varying in size from 3 to 6 feet in diameter. In many of the more advanced European plants mills are now driven directly by belts from line-shaft belt, thus taking the place of the old-fashioned cog gearing, and in several of the more modern mills what are known as tube-mills are being used, the apparatus consisting of a revolving cylinder containing a large number of Iceland pebbles. Into this cylinder the clinker is introduced, and by the revolution of the cylinder and agitation of the pebbles, the material is ground to almost impalpable fineness. Early in the history of th e Lehigh district in this country, millstones directly driven by belts and encased in iron frames marked an advance in American grinding methods. This was followed by the introduction in this and other districts of the Sturtevant, Frisbie-Leukop and other forms of iron and steel grinding apparatus, doing away with millstones. Another improvement in American grinding apparatus in this country dates possibly to the introduction of the Griffin mills by the works of the American Cement Company, at Egypt, Pa., somewhere about 1887. This mill is now largely in use in cement works in America and other countries, its introduction in European works being very extensive during the past two or three years. The apparatus is very simple in construction, and to it and the other iron mills is due much of the reputation American cement has, of late years, for its extreme fineness and sand-carrying qualities. American "Gates" crushers and coffee-mill crushers have also shown their superiority, according to the best reports, over similar machinery used in Europe, and in this line the modern works seem fully equal, if not superior, to many of the leading European works, so far as crushing machinery goes. Having thus noted the differences in the handling of the raw materials, in kilns, and crushing machinery between American and European works making Portland cement, it is next of importance to examine the *American raw materials*, and to note that, notwithstanding their variation in many cases from the raw materials of Europe, that American Portland cement produced from these comes up, in both *chemical analysis* and *standard* tests, to the highest grade of the old-established European brands of Germany, France and England.

AMERICAN RAW MATERIALS.

In the United States raw materials for Portland cement may be said to be very numerous and quite varied. The principal of all the deposits, and the one from which the largest amount of cement is turned out, may be said to be that of the Lehigh hydraulic limestones, above stated, which are found on either side of the Lehigh River, at or around Coplay, and which extend for a considerable distance, and are found farther down across the Delaware, near Phillipsburg, N. J. These rocks are laminated water lime rocks, and by reason of their chemical composition, as well as their structural character, are specially adapted to the manufacture of Portland cement. They form a part of what is known as the Silurian argillaceous limestones, a formation which also forms cement rocks for many of the other cement districts. The Glen Falls cement which is made at Glen Falls, N. Y., is made from a lime rock of the Silurian formation, together with clay or clay rock found in the same vicinity. In New York State, at and around Jordon, Warners and Wayland, the principal ingredient is the white marl of the Silurian formation, while similar materials are also used in the manufacture of cement in the Michigan and Ohio districts. Further west, at San Antonio, Tex. White Springs, Ark., and Yankton, S.D., Portland cement is made from the cretaceous rocks which are found outcropping at various points there and throughout a large territory in the middle West. These with clay, produce excellent cement.

Grouped according to districts and the raw material found therein, the American Portland cement industry may be said to embrace.

(1) *The Lehigh district*, with a total product, according to the figures for 1897, of 1,640,000 barrels, or nearly 75 per cent. of the total output of the country. It extends along the Lehigh River from Siegfried, Pa., to Phillipsburg, N.J., and includes the four mills of the American Cement Company, at Egypt; the two mills of the Coplay Cement Company, at Coplay; the two mills of the Atlas Cement Company, at Coplay and Northampton; the mill of the Hercules Rock, Lock and Bonn-

ville Companies at Whitehall and Siegfried, and the mills of the Alpha and Vulcanite Companies, near Whittaker, N J.

(2) The New York district, embracing the marl and clay raw material plants of the Empire and American Cement Companies, at Warners and Jordon, and the Wayland and the Whittemore, Rauber and Vicinus Works, near Wayland. In addition to these is the Glen Falls (N.Y.) Portland Cement Works, using rock materials.

(3) The Ohio district, including works at Sandusky and Castalia, O., operated by companies of the same name, and using marls and clays, while rock materials are used by the Diamond Cement Company at Middle Branch.

(4) The South Dakota district, with the works of the Yankton Portland Cement Company using a species of chalk and clay.

The following table, from the "Mineral Industry of the United States," Vol. VI., gives the latest figures on the production of the various districts. The Michigan district uses marl and clay, and several works are going into operation there, among them the Bronson and the Peerless; the Arkansas district is limited to a single works, at Chalk Cliffs; the Illinois, to a single works, near Chicago, which was recently burnt down; the Texas region to one works, near San Antonio; the Utah, to a single works, near Salt Lake, also recently burnt, and the California, to two small works, at San Diego and Colton respectively:

PRODUCTION OF PORTLAND CEMENT IN THE UNITED STATES.
(*In Barrels of 400 Pounds.*)

States.	1896.			1897.		
		Value at Works.			Value at Works.	
	Barrels.	Total.	Per barrel	Barrels.	Total.	Per barrel.
		Dols.	Dols.		Dols.	Dols.
California	8,985	17,970	2 00	17,060	51,180	3 00
New Jersey	270,858	400,999	1 48	440,454	641,421	1 45
New York....	266,482	445,591	1 67	367,994	592,676	1 64
Ohio	163,182	320,304	1 96	147,332	291,640	1 98
Pennsylvania..	825,000	1,225,000	1 49	1,200,000	1,740,000	1 45
South Dakota.	21,776	47 552	2 00	39,900	75,810	1 90
Texas	15,000	38,000	2 53	7 778	19.912	2 56
Other States*..	4,000	7,000	1 75	58,453	108,850	1 86
Total barrels	1,577,283	$2,502,479	$1 59	2,272,971	$3 521,489	$1 55

* Includes Arkansas, Illinois Michigan, and Utah.

CHEMICAL ANALYSIS.

The chemical analysis of the American cements, while dealing with materials of different structural character than those which are used abroad, may be said to compare most favourably with the chemical analysis of the European product. It is a well known fact that the chemical analysis of Portland cement may vary largely in many of its ingredients, owing to the particular kind of materials out of which it is made, and their action under the flame of the kiln, but a comparison of the analyses shows that American Portland cements show no material difference from the better grades of the European brands.

In fineness American Portlands considerably excel the imported brands, and also excel them in neat and sand mortars in many cases at both short and long time tests.

In reply to the one vital question which may be asked of the American Portland cement manufacturer—will your cement stand the test of time?—the record of nearly half a million barrels of one American Portland cement up to periods of from one to nine years, shows that American Portland cement meets all the requirements of stability and permanence, and has, in fact, "come to stay."

The Cold Storage of Fruit.—A report by Mr. W. P. Wright, county superintendent in horticulture, on the experiments in the cold storage of fruit being carried out under the auspices of the Kent County Council has just been issued. The results of the experiments on strawberries may be epitomised as follows:—(1) The fruit cannot be kept long in a temperature of 36 degs. or upwards; (2) it can be kept for three weeks at least in a temperature of 30 deg.; (3) it is necessary to surround the fruit with cotton wool, or in the case of fruit in sieves, to place a pad of that material over the top. If this precaution is not taken the fruit, though sound, becomes dull and loses the fresh, inviting appearance which is so important when it is offered for sale. The general results were:—(1) The fruit must be placed in store in advance of dead ripeness, especially in the case of strawberries. Fruits that are fully ripe will keep for some time, but lose surface freshness, becoming seared and unsightly. (2) Cherries pecked by birds soon go off, and other fruits impaired in any way will not keep. To achieve success the fruit must be sound. (3) The fruit should be covered or surrounded with cotton wool. It was observable that that so treated retained its freshness much longer than that left exposed. (4) The chambers must be kept dry, and close-fitting doors are necessary. (5) All decaying or impure matter must be rigidly excluded.

Legal Intelligence.

SUPREME COURT OF JUDICATURE.

COURT OF APPEAL.

(*Before the Master of the Rolls, Lord Justice Chitty, and Lord Justice Vaughan Williams.*)

LEVER BROTHERS V. BEDINGFIELD.

This was an appeal by the defendant against a decision by Mr. Justice Kekewich. The plaintiffs, who are manufacturers and proprietors of a soap called "Sunlight soap," brought the action to restrain an alleged infringement by the defendant of their trade-mark, and from passing off his soap as that of the plaintiffs'. The plaintiffs had registered as a trade-mark a certain device for their cardboard boxes of soap, the device being coloured and having at the top in large letters the word "Sunlight." The defendant also sold his soap in cardboard boxes of the same size as the plaintiffs', with a device similar in colours and general appearance to that of the plaintiffs', but having at the top in large letters the words "Red Maid," his soap bearing that name in the market. The plaintiffs complained that the similarity was such that it would probably injure the sale of their "Sunlight" soap. The learned Judge held that there had been no infringement of the trade-mark, but he came to the conclusion that the defendant had endeavoured to pass off his goods as those of the plaintiffs', and granted an injunction accordingly. The defendant appealed, and the plaintiffs gave a cross notice of appeal as regarded the trade-mark. The appeal was argued on November 16th and 17th, when the Court reserved judgment.

Mr. Warrington, Q.C., and Mr. Schiller were for the defendant; Mr. Warmington, Q.C., Mr. P. O. Lawrence, Q.C., and Mr. Sebastian were for the plaintiffs.

The Master of the Rolls delivered the judgment of the Court allowing the defendant's appeal, but dismissing the plaintiffs' cross appeal as to the trade-marks. Having expressed his concurrence in the decision of the learned Judge upon the latter point, his Lordship proceeded as follows:—We pass to the general get up of the defendant's boxes. They are of the same size and shape as those of the plaintiffs, but this size and shape are common in the trade. The distinctive feature is the wrapper. The defendant's wrappers are in truth extremely dissimilar from those of the plaintiffs'. The prominence of the word "Sunlight" on the plaintiffs' wrappers and the substitution in equally large type of the words "Red Maid" on the defendant's wrappers, coupled with the other differences between the wrappers, make the dissimilarities so obvious as to draw attention from the resemblances. The differences, not the resemblances, are what catch the eye. The witnesses called for the plaintiffs show that if trickery is resorted to one can be passed off for the other, but there is nothing like proof that in the ordinary course of business the defendant's boxes are likely to be mistaken for the plaintiffs'. The weight of the evidence is quite the other way, and the learned Judge came to the same conclusion. No deception in fact was proved, and no probability of deception in the ordinary course of business was established. But the learned Judge has, nevertheless, granted an injunction against the defendant because he intended to deceive and so make up his soap as to pass it off for the plaintiffs.' In granting this injunction the learned Judge considered he was giving effect to Lord McNaghten's judgment in "Reddaway *v.* Banham," 1896 (A.C., 199) (see page 219). With great respect to Mr. Justice Kekewich, we think he has here fallen into an error. Deception was not only intended, but was proved in "Reddaway *v.* Banham." But in this case there is no proof that the defendant intended to do more than use the wrapper complained of; and if that wrapper does not in fact deceive and is not calculated to deceive, there is no ground for granting an injunction against the defendant who uses it. No injunction can properly be granted to restrain a man from doing that which, if done, will not infringe the plaintiffs' rights. The defendant no doubt wanted an ornamental wrapper which would attract the public. His designer took the plaintiffs' wrapper as the best to start from, and he adapted it to what he thought would meet the defendant's wants and would not infringe the plaintiffs' rights. There is always danger in this mode of procedure, and the first design made for the defendant was thought to go too far, and we think it did. But it was altered before action. The defendant refused to alter it further, and, although it is obvious that he could easily have done so without detriment to his own business, we are unable to say that in point of law he was bound to do so. The appeal, therefore, must be allowed and the injunction must be discharged, and the plaintiffs must pay the costs of the appeal, including the costs occasioned by their own notice by way of cross appeal. As regards the costs of the action, we cannot overlook the fact that the defendant has only himself to thank for the litigation which he deliberately provoked. Although in the result he has succeeded, still no one can say that the action was unreasonably brought by the plaintiffs. They could not be expected to submit to the

defendant's mode of dealing with their wrapper without challenging its legality. In these circumstances we shall simply reverse the judgment appealed from and order judgment to be entered for the defendant without costs.

RIVER WEAVER NAVIGATION.

THE annual meeting of the trustees of the River Weaver was held on Thursday last week at Northwich, Colonel France-Hayhurst presiding. Sir Joseph Verdin (chairman of the Finance and Works Committee) submitted the annual report for the year ended March last. The total receipts on revenue account had amounted to £46,621., a decrease of £1,559 on the previous year. The expenditure was £43,942., a decrease of £2,310. The total tonnage carried on the Weaver during the year was 1,008,575, the tolls amounting to £38,766; while on the Weston Canal 133,143 tons had been carried, and the tolls were £770. On the Weaver there was a decrease of £2,087. in the tolls, and on the Weston Canal an increase of £119. At Weston docks 162,718 tons had been dealt with, a reduction of 6,155, and the revenue was £5,942. The imports were 13,000 tons greater than those of any previous year. Pressure had become so great that additional wharfage had to be provided, and it was also proposed to extend Tollemache wharf. The mortgage debt created prior to 1890 had been reduced during the year from £180,365. to £171,152, but to this must be added a bond of £5,000. held by the bankers, repayable in 1900, as well as the further mortgage of £35,000. given in respect of a loan guaranteed by the County Council. The indebtedness of the trustees was thus £211,757. For the important new works in progress on the Navigation it had been found necessary to obtain the full loan of £60,000. The removal of the Newbridge locks was completed in June; at Northwich exceptional difficulties were encountered in the making of the pontoon chamber for the new swing bridge, and an additional contract was necessitated; the old town bridge had been closed, and would be re-erected across the river Dane at the cost of the County Council and the Northwich Urban Council. In consequence of a serious fire at Weston Point Church it had been found necessary to pull down the whole of the tower. The condition of the approach channel between the Weston Mersey Lock and the Mersey Deep had been unsatisfactory throughout almost the entire year, and frequent representations had been made to the Manchester Ship Canal Company pointing out that they had not provided an "access" channel in accordance with their Act of 1885, and pending this being done temporary arrangements had been made enabling Weaver traders to use the Ship Canal between Weston Point and Eastham free of charge. An agreement had been entered into with the Northwich Electric Supply Company for the supply of electric power for turning the new swing bridges, supplying light to the Weaver offices, church, and other Weaver property.

The Chairman, in moving the adoption of the reports and financial statement, said the reduction of expenditure was the result of the Special Committee's deliberations. Good work had been done at Weston Docks, the imports of pottery goods being larger by 13,000 tons than in any previous year. They were also assured that if they could provide further wharf and warehouse accommodation there was plenty of trade to be had. The exports of salt at the docks, however, showed a heavy falling off, as they did also on the river, and this, combined with a small but all-round shrinkage in the tonnage of goods passing along the Navigation, required that the expenditure should be limited to that absolutely essential for the maintenance of the Navigation only. The retiring chairman and vice-chairman were re-elected. The vacancies caused by the death of Mr. T. Moore were filled by the appointment of Mr. C. P. Walker on the Finance and Works Committee, Mr. J. F. L. Brunner on the Parliamentary, Dr. Hewitt on the New Works, and Mr. H. J. Falk on the Ship Canal.

PATENT AGENTS AND THE "AMERICAN SYSTEM."—In his presidential address to the Society of Patent Agents recently Mr. W. Gadd dealt with the oft-expressed desire to reconstruct the basis of the British Patent Laws, on the lines of the United States statutes or those of Germany. Mr. Gadd expressed the opinion that, although the former were—in theory—the best in the world, they contained, in practice, features which made them the worst. Under the United States system many patents were necessarily refused which ought to be granted, while others were allowed which as assuredly ought to be refused. The same remarks applied to the German law, and the frequency of litigation proved their truth. There was certainly room for improvement in the English Patent Law, but there was no necessity to go abroad for it. In conclusion, Mr. Gadd protested against the growing practice of obtaining a mere "cover" patent, which it was never intended to work.

THE WORKMEN'S COMPENSATION ACT.

IS LEAD POISONING WITHIN THE ACT?

HIS Honour Judge Addison had before him, at the Southwark County Court on Monday, a case in which J. Williams, a window blind painter, made a claim under the Workmen's Compensation Act against William Duncan, window blind manufacturer, Newington Causeway.—His Honour: Is it a point of law or fact in this case?—Mr. Sherman (who appeared for the respondent): A point of law, sir.—His Honour: I have tried only three cases under this Act, and each has contained a point of law for the Appeal Court. I have disposed of no fewer than six points of law in those actions, and, curiously enough, have had to find for the respondents in each case.

The plaintiff's case was that while employed by the respondent he contracted lead poisoning, and was unable to work for fifteen weeks in consequence. He used ordinary white lead. He contended that the Home Office regulations were not complied with on the respondent's premises.

Dr. Crosthwaite, who attended Williams, said he believed that lead had been accumulating in the man's system for some time, and that the hot weather helped to "bring it out."

The respondent denied that the Home Office regulations were not carried out in his factory.

Mr. Sherman submitted that the applicant mus tfail, because illness contracted through employment was not an accident within the meaning of the Act, which read, "If in any employment to which this Act applies personal injury by accident arising out of and in the course of the employment is caused to a workman, the employer shall be responsible." This was not "injury by accident" The question was considered when the Act was in the House of Commons. The question of "phossy-jaw" was then raised, and it was asked if it could be called an accident. The answer of the Government was that they were advised not. If lead poisoning were to be an accident within the meaning of the Act it would have been made clear. Nobody could say in plain English that sickness was an accident.

His Honour: I must construe the word "accident" as meant by the Act, not in the dictionary sense.

After further argument on this point his Honour found for the respondent on the ground that the applicant had not suffered "personal injury caused by accident." He, however, assessed the applicant's damages at £6. 10s. in view of an appeal.

ELECTRICAL TRANSMISSION OF POWER.

AT the Society of Arts, London, last week, Professor George Forbes, F.R.S., read a paper on the "Long-Distance Transmission of Electric Power." Sir J. Wolfe Barry was in the chair. The lecturer began by remarking that, though long-distance transmission had been much talked about, little had been done, and there were few people who realised what a vast field there was in that way for investment of capital on a sound commercial basis. He proceeded to refer to some instances with which he had had to deal in India, New Zealand, and Egypt, in which long distances were concerned. Thus he found, when considering the utilisation of the Nile cataracts, that the electric lighting of Cairo could be done more cheaply by power generated at the first cataract—400 miles distant as the crow flies—than by steam engines at Cairo, and he believed that if the gold mines in Rhodesia were really good it would pay handsomely to transmit electric energy 500 miles from the Victoria Falls of the Zambesi, provided the surveys showed the falls to be as satisfactory as they appeared by the photographs, and provided that fever was not an insurmountable obstacle. Many a gold mine, hitherto considered worthless because of the cost of power, would be found to be valuable if water-power were available within a few hundred miles. People were often appalled at the capital required for copper conductors, but he suggested a simple financial transaction which he believed copper merchants or others would willingly make and which might avoid the huge capital required by those that transmitted power. He proposed to divide the capital account into two parts—ordinary stock that might be looked on as speculative, and bonds on the copper, which would be as sound an investment as could be desired. Most of the capital of a transmission company was required for the copper. On this, which might be removed if the enterprise failed, and was an absolutely safe security, a mortgage might be raised, 4 per cent. being probably sufficient to cover the chances of a change in market value, and thus by a simple transaction a great reduction might be made in the total capital required by the transmitters of energy, with consequent increase of interest earned. Professor Forbes concluded by explaining some methods elaborated by himself for rapidly estimating the cost, on the ordinary lines of working, of any particular case of long-distance transmission of power by electricity. A discussion followed the reading of the paper.

Trade Notes.

Obituary.—*Josiah Rigby Wylde.*—On the 28th of November last, this chemist passed away at the age of 42. He was buried at Sankey Cemetery on Thursday, December 1st, in the presence of a goodly number of his confréres. He will be missed in the Widnes and St. Helens disticts, for he was a good servant of the United Alkali Co., of whose works he was a district manager. We hope to give a more extended notice in our Special Issue.—It is with regret that we have to record the death of Mr. Colchester, J.P., chairman of Lawes Chemical Manure Co., Ltd. Mr. Colchester had attained the advanced age of eighty-five. His illness was of short duration; he attended the last directors' meeting held in London about a fortnight ago, and on his return home was seized with an attack which ended fatally. Mr. Colchester had been connected with the Lawes' Co. since its formation in 1872, and for the past eighteen years occupied the position of chairman, and has been identified with the chemical manure industry from its birth. His loss will be deeply felt Mr. Colchester was a man of great business capacity, and had been connected with various extensive commercial undertakings for many years past.

Hungarian Glass Works Closed.—The oldest industrial establishment of Hungary—the Bikszard Glass Works—has ceased to exist after an uninterrupted period of activity lasting one hundred and forty years. Their best customer was Roumania; but, owing to altered circumstances and the increase of the cost of production, the competition with the requirements of modern progress could not be borne, and the old-established business has had to come to an end.

Society of Chemical Industry: *London Section.*—The next meeting will he held on Monday, December 5th, at the Chemical Society's Rooms, Burlington House, Piccadilly, at 8 p.m. The following papers will be read:—Colonel W. J. Engledue. R.E.—"On ozone and its commercial applications." Mr. Arthur Marshall—(*a*) "An improved Apparatus for the estimation of carbonic acid in minerals, etc."; (*b*) "The preparation of standard solutions of sulphuric acid."

Electric Traction on the District Railway.—The manager of the London Underground Railway has stated that it will be some eight or nine months before the machinery and plant will be in a sufficiently complete state to enable the carrying out of the electric traction experiment between Earls Court and Kensington. It depends upon the result of this trial whether electricity will be substituted for steam on the whole of the underground railway. The particular section of line has been chosen because it includes the steepest gradients on the whole of the system.

Northwich Salt Compensation Board.—The annual meeting of the Northwich and District Salt Compensation Board, established to administer relief to sufferers from subsidence caused by brine pumping, was held last week under the presidency of Sir Joseph Verdin. The treasurer's accounts showed that the full rate of 3d. per 1,000 gallons of brine pumped had been levied upon salt and chemical manufactures and other brine pumpers; for the first time the Board were in a position to pay all claims in full. Claims will be adjudicated upon on December 12th. Sir Joseph Verdin was reappointed chairman, Mr. Harry Thornber, county councillor, Sale, vice-chairman, Mr. Fletcher solicitor, and Mr. Ward surveyor.

The Metal Industries of Liege.—A report on the working of the metal industries of Liege Province during the past year has been issued by the Foreign Office. It shows considerable prosperity in the cast-iron trade; for the first time for many years all the blast furnaces were kept in constant activity, the average number of working days increased, and the production was the largest on record, being over 404,000 tons. The growth of this branch of industry in the province has been very rapid. The average annual production of cast iron between 1877 and 1881 was only 165,865 tons, but the differen categories of cast iron have not contributed equally to the increase. Forge and manganesed pig iron have both increased, as has pig-iron for Thomas steel, but the production of pig-iron for Bessemer steel has declined. The total value of the production of the blast furnaces was over a million sterling. The wrought and finished iron industry in the district has been declining in importance for some years past. Since 1889 the reduction in finished iron has amounted to a third. As regards the steel industry, the production of unwrought steel has recently increased in a remarkable way. In 1886 the Liege steel works turned out 136,611 tons of steel ingots, valued at over 10½ million francs, while in 1897 they produced 355,656 tons, valued at over 32¾ millions. The manufacture of wrought steel is also increasing, although last year there was a slight decline. The lead and zinc foundries also showed increased production last year.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are unchanged, with 90's and 50/90's at 8½d. There is no change in carbolic acids, which remain steady. Solvent naphtha is firm at 1s. 2d. Crude unaltered Anthracene is nominal at 4d. for 30% A, and 3d for B. Creosote firm. Pitch steady at 25s. f.o.b. East Coast, and 22s. West Coast.

Sulphate of Ammonia is steady, and prices are well maintained by makers in spite of endeavours to depress values. Nearest closing prompt prices are:—Beckton, £10.; London outside makes, £10.; Liverpool, £10.; Hull, £9. 18s. 9d. to £10.; and Leith, £10. Forward business dull.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business continues active for forward deliveries. There seems to be more disposition on the part of buyers to regard prices as having touched the bottom. For caustic soda, prompt prices are slightly easier, viz, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £6. 17s. 6d.; 60%, £6. nett f.o.b. Liverpool 10 tons lots; and for contracts over 1899 business is reported at 7s. 6d. to 10s. per ton lower. Ammonia alkali is steady, free on rails at £3 17s 6d. bags for forward, and £4. 2s. 6d. prompt. Soda crystals and bicarbonate unchanged. Saltcake, in bulk, firm at 26s. per ton, f.o.r. Lancashire works. Bleaching powder is still in active competition for forward business in the home trade at £4. 2s. 6d. to £4. 5s. per ton f.o.r., and prompt £4. 12s. 6d. Hardwoods, f.o.b. Liverpool, £5. 5s. to £5. 10s per ton. Chlorate of potash and soda are without alteration at 3⅝d. and 3¼d. per lb. respectively. For sulphate of copper price is firm and demand brisk at £18 10s. f.o.b prompt, and £18. 15s. to £19. forward. Aniline oil and salt are rather dearer. Brown acetate of lime firm at £5. 7s. 6d. to £5. 10s ex ship. White sugar of lead, £25. per ton, c.i.f.; brown, £18. per ton. Acetate of soda steady at £12. 5s. ex ship. Yellow prussiate of potash firm at 6⅝d. to 6¾d. per lb. Carbonate of potash 90/92, £14. 10s. to £14. 15s. c.i.f. Caustic potash unchanged. Bichromate of potash, 3½d. per lb; soda, 2¾d. per lb. White powdered arsenic quiet at £16. 7s. 6d. to £16. 10s. f.o.r. Garston. Muriate of ammonia advanced. Other ammonia salts are firmer.

REPORT ON MANURE MATERIAL.

There is nothing very special in the market upon which to comment.

Phosphates are coming forward against contracts, but there is very little new business being done for 1899 shipment. Quotations remain as last reported both for high and low grades. Tennessee Rock is forward at 6¾ per unit, c.f.&i. to good U.K. ports, but it does not seem to find a ready sale at the price.

Sales of East Indian Bone Meal have been made at £5 per ton, ex quay Liverpool, for early shipment, and at the close the market is firm at this price.

Nitrate of soda remains at 7s. 6d. per cwt. for ordinary and 7s. 7½d. per cwt. for fine quality.

There is nothing to report in miscellaneous nitrogenous material.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is steady, but the business passing is small. Olive meets with a limited demand, but prices are steady and well maintained. Linseed is quiet at 17s 9d. to 18s. 6d. per cwt. for Liverpool makes in export casks. Cottonseed firm, with holders at 15s. to 15s. 6d. for Liverpool refined. Castor oil is easier for spot, and sales have been more extensive. Good seconds Calcutta are quoted 2⅝ to 3d (sellers); first pressure French, 2⅞d., and Madras 2¾d. per lb. Tallow is steady, but transactions are not very numerous or extensive. Resin is scarce and firm for all grades, with a quiet demand. Spirits of turpentine firm, with sellers asking 29s. 6d. per cwt. spot. Petroleum steady, with a moderate trade in refined oils. American 6⅝d. to 8d., and Russian refined 6d per gallon.

CAKES.—Rather a steadier tone rules for American Western linseed on the spot, and sellers are now asking £7. 1s. 3d. to £7. 7s. 6d., but the business passing has only been on a moderate scale. River Plate and Russian are both without material change from last market, the former being quoted at £7. 7s. 6d., usual terms, and the latter at £7. 8s. 9d. to £7. 12s. 6d. net cash; whilst Bombay are again the turn in buyers' favour at £7. 7s. 6d. to £7. 10s., the recent arrivals having rather a dragging market. A very steady tone rules in the market for

Liverpool makes, and the recent quotations are well maintained at £7. 17s. 6d. to £8. 15s. per ton according to brand, with a fair business doing. Good to choice brands of American decorticated cottonseed are well held, and meet a brisk consumptive inquiry at £5. 12s. 6d. to £6., according to quality, with moderate sales making in Liverpool makes at £6. 7s. 6d. to £6. 15s. per ton. Undecorticated Liverpool makes are rather easier, but a good demand is still experienced at £4. 5s. to £4 15s. Egyptian on the spot are still firm at £4 5s. per ton, with a fair inquiry.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron easier: Scotch warrants closed at 49s. 5½d.; Middlesbrough, — cash; and hematite, 57s. 7½d. Copper quiet: Chili bars, G. O. B.'s and G. M. B.'s, closed at £56. 2s. 6d. to £56. 7s. 6d. cash, and £56. 2s. 6d. to £56. 7s. 6d. three months. Tin dearer: Straits closed at £83. 15s. to £84. 5s. cash, and £84. 5s. to £84. 15s. three months; Australian, £84. 7s. 6d.; English ingots, £86. 10s. to £86. 15s. Lead easier: Spanish, £13. 5s. to £13. 6s. 3d. English, £13. 10s.; Silesian spelter, ordinary, £24. Nickel, 1s. 2½d. Antimony, £37. Quicksilver: First hands, £7. 10s.; second hands, £7. 9s. *Copper shares* quiet: Cape, 5 1/16 to 5 1/8; Copiapo, 2 5/16 to 2 11/16; Libiola, 1⅞ to 2⅛; Mason and Barry, 3 1/16 to 3 3/16; Rio Tinto, 30 1/16 to 30 3/16; Tharsis, 7 7/16 to 7 9/16.

GLASGOW, WEDNESDAY.—Market slightly easier, and a good business. Scotch done at 49s. 6d. cash, and 49s. 8½d., 49s. 9d., and 49s. 8½d. month; buyers, 49s. 5½d. cash; sellers, 49s. 6d. Cleveland idle; buyers, 45s. 6d. month; sellers, 45s. 11d. Cumberland hematite done at 57s. 8d. to 57s. 7½d. cash, and 57s. 9½d. to 57s. 9d. month; buyers, 57s. 7½d. cash; sellers, 57s. 8d. Middlesbrough hematite done at 55s. 3d. month; buyers, 55s. 2d. month; sellers, 55s. 4d.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Linseed oil has been very firm and dearer but closes again quiet. Turpentine has made a further advance upon the week of £2. per ton. Cottonseed oil, however, closes flat. The freight market continues very strong, to which may be attributed the advance in American mineral oils. The imports during the year as against the same time a year ago have been:—Wheat, 2,472,254 qrs. against 2,102,899 qrs.; flour, 251,421 cwts.; linseed, 401,130 qrs. against 640,207 qrs.; whilst oilcakes have an increase, being 13,474 tons against 9,361 tons; rapeseed, 106,604 qrs. against 85,851 qrs.; cottonseed, 156,087 tons against 176,835 tons; olive oil, 5,773 tuns against 4,202 tuns; tar, 12,497 barrels against 14,593 barrels. Linseed oil closes quiet, spot sellers at 15s. 7½d. naked; January, 15s. 6d. sellers, the same price being paid for May/August. Boiled and Refined £1. to £1. 10s. per ton extra. Refined cotton oil flat; spot, naked, sellers, 12s. 6d, the same being the quotation to April, crude being quoted at 11s. 6d. naked; barrels £1. 10s. and ordinary casks £1. per ton extra. Turpentine is quoted at 29s. 6d. Castor oil, extracted here, pure pharmaceutical, cold drawn, 29s. 6d. per cwt. in barrels, 3¾d. per lb. in eases; firsts, 27s. in barrels, 3 1/16d. per lb. in cases; seconds, 26s. in barrels, 2 15/16d. in cases. Resins firm and unchanged. Olive oil from £31. to £33. Olive oil soap unchanged. Oleines £17. 15s. per ton, f o b. here. Cod oil, £16. to £18 per ton. Danish butter, 116s. per cwt.; Dutch, 106s. to 110s.; Canadian, 96s. to 106s.

CAKES.—The present change in the weather should stimulate demand for all feeding stuffs. There is at present a steady market with a fair demand. Linseed cakes, 95% pure, being quoted from £8. 2s. 6d. to £8. 5s. per ton; oil-cakes (linseed), £7. 2s. 6d. to £7. 5s. Russians, £7. 7s. 6d. to £7. 15s. Cotton cakes, best makes, £4. 5s. to £4 6s. 8d.; seconds, £4. 2s. 6d. to £4. 5s.; decorticated, £6. 5s. to £6. 7s. 6d. Rape cakes, Black Sea, £4. 2s. 6d. per ton.

PAINTS.—The prices are unchanged, and vary much according to repute of maker. Orders are scarce and difficult to get.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

In general chemicals there are no new developments and the feeling is still to the weak side. Reports go to the effect that, in those contracts already entered into for supplies over the new season, the rates going show no betterment from those that have lately ruled. There are, of course, exceptions to the overhead present weakness, and both sulphate of copper and borax continue to show signs of increasing strength. Sulphate of ammonia prompt f.o.b. Leith was sold in one case at £9. 17s. 6d., the seller being not a maker but a middleman. Makers hold out for £10. and have got that though the call is by no means brisk. Forward business in this article continues a blank for the present. In the different products of the mineral oil companies of Scotland the recently improved feeling is maintained. Paraffin spirit (naphtha) has advanced a halfpenny a gallon of late on entering its best season. The lighter gravities of lubricating oils are, if anything, firmer, consequent on a small advance made by the American makers.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 10s. od, 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d., and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. od.; borax, English refined, £14. 0s, and boracic acid, £25 nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d nett, f.o.b. Glasgow); chlorate of potash, 3¾d, less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £18. 0s. od. to £18. 5s od less 5% Liverpool; paraffin scale, hard, 1½d. to 1 5/8d. per lb., and soft 1 5/8d. per lb.; paraffin wax, 120° semi-refined, 1 7/8d. to 2 1/8d. per lb; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals contine dull and as usual at this time of the year, shipments show signs of falling off. Caustic 76/77% is quoted at £7. 15s. to £8. and 70% £7. 5s to £7. 10s per ton. Soda crystals in fair demand at £2. 12s. 6d. per ton, gross weight, locally. Sulphur scarce at £4. 15s. to £5. per ton.

Bleaching powder, sons, £5 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—There is very little alteration in the market. The demand is good for best Northumbrian steam, though for bunker and manufacturing coals prices are weakening and demand dull. Coke is firm for home consumption. Best Northumbrian steam, 9s. 6d. to 9s. 9d. per ton; second qualities, 8s. 6d. to 8s 9d. per ton; small steam, 5s. to 5s. 3d. per ton; gas coals, 9s. to 9s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 17s 6d. to 21s. per ton

New Companies.

Figure Improving Soap Co., Ltd.—CAPITAL £20,000. in £1. shares (2,000 def.). This company has been formed to acquire and carry on the business now carried on in connection with the Amiral Green Soap (Savon Vert de l'Amiral) by L. E. Granichstadten. The subscribers to the memorandum of association are:—J. Kelly, 10, Catherine-street, S.W., merchant; P. Leaver, 47, Knowle-road, Brixton, journalist; W. Hall, 215, Ivydale-road, Nunhead, writer; W. J. Glynn, 14, Little Albany-street, Regent's Park, N.W., clerk; E. Maginis, 28a, Basinghall-street, E.C., merchant; W. Migge, 28a, Basinghall-street, E.C., secretary; H. C. Grant, 150, Amesbury Avenue, Streatham Hill, clerk; E. H. White, 27, Clement's-lane, E C., clerk.

New Electro-Chemical Manufacturers' Association, Ltd.—CAPITAL £2,000. in £1. shares. This company has been formed to carry on the business of electricians, electrical, mechanical, metallurgical, and chemical engineers, etc. The number of directors is not to

be less than 3, nor more than 7. The subscribers are to appoint the first. Qualification, £10.

Tannery, Lincoln, Ltd.—Capital, £75,000. in £10. shares (3,000 £6% cum. pref) This company has been formed to adopt an agreement with F. Gallsworthy, and to carry on the business of tanners, curriers, hide and leather merchants, tanning and currying material merchants, machine and other belting manufacturers, harness, boot and shoe manufacturers, etc. The subscribers to the memorandum of association are:—F. Gallsworthy, 1, Beech Grove, Harrogate, tanner; J. Shaw, 4, Monson-street, Lincoln, tanner; A. Whaley, Castle Cottage, Lincoln, leather merchant; J. Beaumont, 22, Broadgate, Lincoln, leather merchant; G. H. Hebblethwaite, Westroyd, Mirfield, belt manufacturer; J. M Barwick, 24, Basinghall-street, Leeds, solicitor; A. C. Peake, 24, Basinghall-street, Leeds, solicitor.

Storry, Smithson, & Co, Ltd.—Capital £40,000. in £10. shares. This company has been formed to acquire the business carried on as Storry, Smithson & Co., at Hull and elsewhere, to adopt an agreement with E. F. Ingleby, J. F. Ingleby, and E. W. Ingleby, and to carry on the business of varnish, paint, colour, and grease manufacturers and merchants, oil boilers and refiners, seed crushers, etc. The subscribers to the memorandum of association are:—E. F. Ingleby, North Ferriby, E. Yorks, merchant; J. F. Ingleby, Pearson's Park, Hull, merchant; E. W. Ingleby, Shardeloes, Cottingham, E. Yorks, merchant; C. H. W. Wilson, Water Priory, Pocklington, E. Yorks, shipowner; C. H. A. Wilson, Tranby Croft, near Hull, shipowner; G. W. Ingleby, St. Leonards, Newland, Hull, merchant; J. G. Lundy, Eagle House, Cranbourne-street, Hull, merchant; A. Frost, Eldon Grove, Beverley-road, Hull, merchant.

Gazette Notices.

PARTNERSHIP DISSOLVED.

Bottomley & Robinson, soap and colour makers, Wyke, near Bradford.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 19th.

Acetic Acid—

Holland,	20 pks.	J. Owen
Belgium,	25	Leach & Co.
Holland,	138	A. & M. Zimmermann

Acetone—

France,	25 pks.	Thames S. T. & L. Co.
Holland,	20	R. W. Greeff & Co.
,,	10 dms.	T. H. Lee

Acids—

Holland,	60 pks.	Little & Johnston

Alkali—

U. States,	525 c.	Furness, Withy & Co.

Alum—

Holland,	491 pks.	J. White

Alumina Sulphate—

Germany,	75 pks.	H. Wallace & Co
Portugal,	166	Coverly & Westray

Ammonia—

Holland,	£40	H. Lorenz

Ammonium Chloride—

Holland,	£90	H. Lorenz

Barytes—

Germany,	48 pks.	J. L. Lyon & Co.
Holland,	96	Robinson, Roberts & Co.
,,	116	W. Harrison & Co.
,,	24	O'Hara & Hoar
Germany,	200	Burrell & Co.
Belgium,	487	J. L Lyon & Co.

Barium Chloride—

Germany,	23 cks.	Petri Brs.

Bleaching Powder—

France,	57 pks.	J. M. Steel & Co.

Bone Meal—

E. Indies,	100 t.	Perkins & Homer
,,	200	Fox, Roy & Co.

Bones—

Sydney,	9 t.	Anning & Cobb
Belgium,	10	Lucey & Sons
Canary Is.,	20	Cornwall, Sons, & Co.

Caoutchouc—

Zanzibar,	3 c.	L. & I. D. Jt. Co.
Straits,	1,273	,,
B. Honduras,	2	,,
,,	10	Major & Field
Straits,	438	Prop. Bull Wf.
Germany,	255	Butler's Wf., Ld.
Straits,	62	,,
,,	192	E. Boustead & Co.
Rangoon,	115	L. & I. D. Jt. Co.
Straits,	120	Anderson, Weber & Smith
France,	3	H Johnson & Sons
Germany,	12	Prop. Bull Wf.
Straits,	396	Huttenbach & Co.
,,	700	H.W. Jewsbury & Co.
——,	18	Girard Brs & Co.
Borneo,	50	Elkan & Co.

Castor Oil—

E. Indies,	75 cs.	R. G. Hall & Co.
Belgium,	20 brls.	Hamphrey & Co.
,,	50	C. & E. Morton
France,	10	F. Bochin
,,	15	Lucas & Spencer's Wf., Ld.
Italy,	30 cs.	J. & A. Ferguson
,,	10	Lennon & Co., Ld.
France,	23 cks.	J. Greig

Caustic Potash—

Germany,	40 dms.	J. M. Steel & Co.

Chemicals (*otherwise undescribed*)

France,	418	Mory & Co.
Belgium,	8	T. Ronaldson & Co.
Holland,	10	J. Owen
Germany	70	L. & I. D. Jt. Co.
,,	860	A. & M. Zimmerman
Belgium,	147	John Cockerill Line
,,	1,187	T. H. Lee
Germany.	36	Butler's Wf., Ld.
,,	10	T. H. Lee
Holland,	10	M. Benscher
N. Russia,	4	G. Boor & Co.
,,	45	Hughes, Chemery & Co.
Norway,	180	R. Greening
Germany,	229	H. Lambert
,,	25	R. W. Greeff & Co.

Copper Sulphate—

Germany,	18 pks.	Charles & Fox

Cream of Tartar—

France,	20 pks.	Kirkpatrick, Barr & Co.
,,	7	C. Atkins & Nisbet
,,	5	M. Ashby, Ld.
,,	15	B. & F. Wf. Co., Ld.
Holland,	2	Kirkpatrick, Barr & Co
France,	10	W. C. Bacon & Co.
,,	3	H Johnson & Sons

Dyestuffs—

Aniline

Germany,	1 pk.	Butler's Wf., Ld.
Holland,	1	L. & N. W. Ry. Co.

Argols

Cape,	17 pks.	Chalmers, Guthrie & Co.

Cochineal

Canaries,	17 pks.	W. M. Smith & Sons

Cutch

Borneo,	300 pks.	Hoare, Wilson & Co.
U. States,	58	Kleinwort, Sons & Co.
Rangoon,	150	A. B. Curtis & Co

Extracts

France,	200 pks.	T. H. Lee
U. States,	30	Rosenberg, Loewe & Co.

Gambier

Straits,	245 pks.	J. Greig
,,	189	J. Swire & Sons
,,	435	G. W. R. Haller, Ld.
,,	2,387	Leach & Co.
,,	134 pks.	J. W. Cook & Co., Ld.
,,	51	L. & I. D. Jt. Co.

Indigo

U. States,	5 chts.	Kleinwort, Sons & Co.

Shumac

Italy,	50 pks.	Wallace, Ware & Co.

Tanners' Bark

Sydney,	5 t.	A. Gibbs & Sons

Turmeric

China,	53 pks.	R. Warner & Co., Ld.
E. Indies,	18	L. & I. D. Jt. Co.
,,	18	S. Figgis & Co.

Valonia

A. Turkey,	152 t.	Anning & Cobb
,,	30	Hicks, Nash & Co.
,,	7	W. H. Mitchell
,,	50	S. Barrow & Bro

Farina—

Germany,	26 pks.	R. Bennett & Co.
,,	50	J. Knill & Co.
,,	100	J. Barber & Co.
Holland,	40	,,
,,	50	Dunlop Brs. & Co.
France,	65	H. Ewald & Co.
Holland,	100	R. G. Hall & Co.

Glucose—

U. States	500 pks.	500 cwts.	Bellamy's Wf., Ld.
,,	1,000	1,000	Beresford & Co.
,,	250	250	Beck & Pollitzer
,,	1,000	1,000	L. & I. D. Jt. Co.
,,	500	500	Ohlenschlager Brs.
,,	1,000	1,000	Pickford & Co.
Straits,	203	700	E. Boustead & Co.
U. States	250	250	C. S. Lovell
,,	250	250	Thames S. T. & L. Co., Ld.
,,	500	500	Pollitzer, Brs. & Co.
,,	1,000	1,000	Boake, Roberts & Co.
France,	340	340	W. E. Cole
,,	200	200	C. Barnard
Canada,	500	500	L. & I. D. Jt. Co.
,,	500	500	T. M. Duche & Sons
U. States,	1000	1,000	Pickford & Co.
,,	518	518	C. Barnard
,,	50	292	L. & Til.
,,	4,378	7,556	L. C. & D Co. R. G. Hall & Co.

Glue—

Austria,	£140	M. H. Voss
Belgium,	1,600	J. Barber & Co.
Holland,	66	Grossmith & Laboldt
Austria,	150	E. Olyett & Sons
France,	61	Mory & Co.
Belgium,	90	J. E. Kitton
France,	95	J. W. Cook & Co., Ld.
,,	125	Burnett Brs. & Sons
Germany,	180	L. & I. D. Jt. Co.
Belgium,	500	Capes & Self
France,	60	W. C. Davies & Sons
U. States,	135	Armour & Co.
France,	15	Bennett S. S. Co.
,,	60	W. Harrison & Co.
Germany,	43	A. Rosenberg

Glue Stock—

Sydney,	7 bls.	A. McArthur & Co.
Germany,	165	W. Balchin, Ld.
,,	40	Hicks, Nash & Co.

Glycerine—

France,	£310	H. Hill & Sons
Queensl'nd,	360	,,

Guano—

Peru,	1,660 t.	A. Hunter & Co.

Infusorial Earth—

Germany,	63	L. & I. D. Jt. Co.
,,	250	A. Haacke & Co.

Lead Acetate—

Holland,	4 pks	R. W. Greeff & Co.
Germany,	£160	,,

Litharge—

Holland,	10 pks.	Spies Brs & Co.
Germany,	24	Butler's Wf., Ld.

Manganese Ore—

Germany.	14 t.	Craven & Co.

Methyl Alcohol—

Sweden.	9 dms.	Stein Brs.

Molasses—

U. States,	50 cks.	280 c.	L. & I. D. Jt. Co.
,,	570	——	J. R. Francis & Co.
,,	430	2,595	J. Forsey

Nickel Salts—

Holland,	£40	R. W. Greeff & Co.

Ochre—

France,	20 pks.	A. J. Gay
,,	116	W. Harrison & Co.
,,	12	Burnett Brs. & Sons
Holland,	12	Phillipps & Graves
Spain,	115	Silicate Paint Co.

Oxalic Acid—

Holland,	20 pks.	R. W. Greeff & Co.

Paraffin Scale—

U. States,	2,026 brls.	Anglo-American Oil Co.

Paraffin Wax—

U. States,	942 cs. qty.	Anglo-American Oil Co.
Belgium,	100 bgs.	A. B. Curtis & Co.

Pitch—

N. Russia,	460 brls.	Fellows, Morton, & Co.
Germany,	178	,,
Belgium,	6 cks.	Poth, Hille, & Co.
U. States,	33	F. Gardner

Plumbago—

Germany,	7 brls.	Butler's Wf., Ld.
,,	24	J. R. Francis & Co.
,,	100	Beck & Pollitzer
,,	17 cks.	Brown & Elmslie
,,	11	Butler's Wf., Ld.
,,	3	Morgan Crucible Co.
Ceylon,	95 brls.	Doulton & Co.
,,	21	Hoare, Wilson, & Co
,,	147	H Turner
,,	107	Marshall & French
,,	327	J. Thredder, Son, & Co.
U. States,	147 pks.	Lunham & Moore

Potassium Bicarbonate—

Holland,	4 cks.	A. & M. Zimmermann

Potassium Binoxalate—

Holland,	10 pks.	R. W. Greeff & Co.

Potassium Bromide—

Germany,	£33	R. W. Greeff & Co.

Potassium Carbonate—

France,	52 c.	J. A. Reid
Germany,	98	H. Lambert
,,	100	Petri Brs.
,,	120	J. M. Steel & Co.
Canada,	188	Charles & Fox

Potassium Cyanide—
Holland, 30 pks. P. Heydeman
Potassium Oxalate—
Holland, 20 pks. R. W. Greeff & Co.
Potassium Oxychloride—
Sweden, 100 kgs. G. Boor & Co.
Potassium Prussiate—
France, 36 pks. Blagden, Waugh, & Co.
,, 60 cks. Page, Son, & Co.
Pyrites—
Spain, 1,957 t. C. Tennant, Sons, & Co.
Rosin—
Germany, 16 brls. L. & I. D. Jt. Co.
France, 25 C. W. Schmidt
Salicylic Acid—
Germany, 66 pks. Butler's Wf., Ld.
Saltpetre—
E. Indies, 650 bgs. Perkins & Homer
Germany, 250 H. Grey, junr.
,, 86 cks. L. & I. D. Jt. Co.
,, 16 P. Hecker & Co.
,, 60 J. Hall & Son, Ld.
Soap—
Italy, £15 M. Dk. Co.
Holland, 25 A. G. Robinson & Co.
U. States, 90 W. Dixon
Belgium, 20 T. H. Lee
Soda Ash—
U. States, 1,060 c. F. W. Berk & Co., Ld.
Sodium Nitrate—
Chili, 14,019 bgs. W. Montgomery & Co.
Sodium Phosphate—
Belgium, 17 cks. Boake, Roberts, & Co.
Starch—
Holland, 60 pks. A. G. Robinson & Co.
,, 89 Phillipps & Graves
,, 2,000 Little & Johnston
Germany, 6 Butler's Wf., Ld.
,, 50 Phillipps & Graves
,, 600 Horne & Co.
Belgium, 322 T. Ronaldson & Co.
,, 61 Leach & Co.
,, 218 F. Claydon & Co.
,, 83 Taylor Brs.
,, 101 T. H. Lee
U. States, 4,600 R. G. Hall & Co.
,, 350 W. G. Taylor & Co., Ld.
,, 100 Ohlenschlager Brs.
,, 1,200 Union Ltge. Co., Ld.
,, 200 Seaward Brs., Ld.
France, 20 W. E. Cole
,, 40 Carey & Sons
Stearine—
U. States, 10 cks. Hoare, Wilson, & Co.
,, 4 Lunham & Moore
Belgium, 25 pks. H. Hill & Sons
,, 1 ck. Sawer, Sons, & Co.
,, 26 bgs. Beresford & Co.
France, 46 H. Hill & Sons
Sulphur—
Spain, 250 t. J. Forster
Sulphuric Acid—
Germany, 37 pks. H. Lambert
Holland, 10 H. Lorenz
Talc—
E. Indies, £460 A. B. Curtis & Co.
,, 1,142 W. M. Smith & Sons
France, 40 Brasch & Rothenstein
Canada, 349 A. E. Piggott
,, 200 Carter, Paterson, & Co.
Tar—
N. Russia, 87 brls. Linck, Moeller, & Co.
Tartaric Acid—
Holland, 13 pks. B. & F. Wf. Co.
France, 16 ,,
Turpentine—
N. Russia, 100 brls. F. & S. Chiesman & Co.
Ultramarine—
Germany, 7 pks. Brooks & Co.
Varnish—
Germany, 5 pks. Butler's Wf., Ld.
,, 4 Phillipps & Graves
France, 5 Mory & Co.
U. States, 8 Atlantic Transport Co.
,, 6 Dawson Beck
Waste Salt—
Germany, 23 t. F. W. Berk & Co., Ld.
White Lead—
Germany, 23 pks. H. B. Alder & Co.
Belgium, 24 J. R. Francis & Co.
,, 4 J. L. Lyon & Co
,, 41 Burrell & Co.
,, 58 T. & W. Farmiloe
,, 6 Leach & Co.
,, 22 Perkins & Homer
Holland, 84 D. Storer & Sons
Wood Pulp—
Sweden, 440 pks. W. G. Taylor & Co., Ld.
,, 400 Tough & Henderson
,, 809 W. E. Bott & Co.
,, 408 J. W. Cook & Co., Ld.
Holland, 42 F. Claydon & Co.
Belgium, 1,978 P. Heydemann
Norway, 50 Tegner, Price, & Co.
,, 160 J. Owen
,, 1,500 London Paper Mills Co.
,, 246 Christophersen & Co.
,, 250 W. G. Taylor & Co, Ld.
,, 650 John en & Jorgensen
Canada, 1,700 Becker & Co.
,, 480 A. Reed & Co.
Zinc Oxide—
Holland, 130 pks. M. Ashby, Ld.
,, 40 Spies Brs. & Co.
Germany, 50 D. Storer & Sons
,, 74 M. Ashby, Ld.
,, 5 R. W. Greeff & Co.
U. States, 200 M. Ashby, Ld.
Zinc Sulphate—
Germany, £35 F. Smith

LIVERPOOL.

Week ending November 17th.

Albumen—
Marseilles, 7 cs.
Aluminium—
New York 18 bxs. T. Ashbury
Arsenic—
Lisbon, 167 cks.
Barytes—
Rotterdam, 103 cks.
Boracic Acid—
Valparaiso, 112 cs. Kleinwort, Sons & Co.
Leghorn, 55 cks.
Borax—
Leghorn, 58 brls.
Caoutchouc—
Valparaiso, 107 bls. J. H. Schroder & Co.
Castor Oil—
Leghorn, 10 cs.
Chromium Oxide—
Hamburg, 1 ck.
Colours—
Rotterdam, 1 ck.
Copper Oxide—
Rotterdam, 10 cks
Dyestuffs—
Argols
Oporto. 54 cks.
Cochineal
Teneriffe, 6 bgs. Klop, Kullman & Co.
Cutch
Colombo, 596 pks.
Extracts
New York, 50 brls. J. Snackerly & Co.
,, 50 bxs. McArthur
200 brls. & Co.
Baltimore, 10
Genoa, 12 bxs.
Fustic
Curacao, 705 logs R. & E. Woodhead
Shumac
Palermo, 1,350 bgs. 8 bls.
Valonia
Smyrna, 161½ t. 1,587 bgs.
Dyestuffs (*otherwise undescribed*)
Philadelphia, 60 brls.
Farina—
Fiume, 100 bgs.
French Chalk—
Leghorn 5 cs.
Glucose—
Philadelphia, 50 brls.
Boston. 801
New York, 108
Glue—
Rotterdam, 120 bgs.
Lithopone—
Rotterdam, 20 cks.
Manganese Borate—
Hamburg, 4 cks.
Mica—
New York, 5 brls. Houses Cement Co
,, 10
Molasses—
N. Orleans, 1,000 brls. J. H. Livandair
Ochre—
Rotterdam, 5 cks.
Paraffin Scale—
New York, 364 brls. Thompson & Bedford
Rangoon, 160
Phosphates—
Ghent. qty.
Treport, 280 t. Bradbury & Hirsch
Potash—
Hamburg, 30 cks. 80 cs.
Stettin, 19 Sachse & Klemm
Rotterdam, 15
Pumice Stone—
Messina, 60 bgs. 11 cs 16 brls.
Pyrites—
Huelva, 3,186 t. Matheson & Co.
Saltpetre—
Hamburg, 151 cks. 5 brls.
Soap—
Boston, 7 bxs.
Bari, 41 cs.
Rotterdam, 58
Soapstone—
Bordeaux, 150 bgs. Geo. G. Blackwell, Sons & Co.
Soda—
Rotterdam, 18 cks.
Sodium Nitrate—
Iquique, 11,490 bgs. Graham, Rowe & Co.
Starch—
New York, 60 brls. J. Armstrong & Co., Ltd.
Boston, 600 bgs.
Stearine—
Philadelphia, 20 tcs.
Sulphur—
Catania, 35 cks, 21 pks 100 bgs. 67 brls.
Sulphur Oil—
Bari, 25 brls.
Tallow—
Montreal, 54 brls. T. Nickels & Co.
,, 380 tcs.
Tartar—
Bordeaux, 157 cks.
Ultramarine—
Rotterdam, 40 cks.
Varnish—
New York, 16 brls. 1 hf. brl. W. A. Warren
Waste Salt—
Hamburg, 2,170 bgs.
White Lead—
Rotterdam, 57 cks.
Wood Pulp—
Gothenburg, 14 bls. R. L. Lundgren
,, 8 G. F. Green & Co.
Zinc Oxide—
New York, 200 brls.
Zinc White—
Stettin, 50 cks. M. Ashby, Ld.

MANCHESTER.

Week ending November 19th.

Acids—
Antwerp, 1 dm.
Albumen—
Hamburg, 5 cks.
Alizarine—
Rotterdam, 6 kgs. 70 brls. 37 cks.
Alum—
Rotterdam, 5 cks.
Ammonia—
Rotterdam, 3 brls.
Aniline Salts—
Rotterdam, 2 cks.
Asbestos—
Rotterdam, 4 bls.
Barytes—
Antwerp, 348 bgs.
Rotterdam, 600
Bog Ore—
Antwerp, qty.
Chemicals (*otherwise undescribed*)
Hamburg, 20 cks.
Rotterdam, 8 kgs. 6 cks.
Chromium Chloride—
Rotterdam, 3 brls.
Colours—
Antwerp, 2 brls.
Hamburg, 2 cks. 4 cs.
Rotterdam, 20 brls.
Farina—
Hamburg, 230 bgs.
Rotterdam, 750
Stettin, 3,650 Browne, Geveke, & Co.
,, 1,090
,, 400 W. H. Stott & Co.
Glucose—
Montreal, 130 brls.
Rotterdam, 4 cks
Stettin, 1,000 bgs.
Glue—
Antwerp, 35 bls. 16 pks.
Rotterdam, 10 bgs.
Stettin, 40
Treport. 1 ck.
Lead Acetate—
Rotterdam, 15 cks
Potash—
Hamburg. 10 cks.
Rotterdam, 20
Treport, 20 dms.
Potassium Permanganate—
Rotterdam. 50 brls.
Sodium Nitrate—
Rotterdam, 14 cks.
Starch—
Antwerp, 361 cs.
Danzig, 315 bgs.
Montreal, 400
Rotterdam, 109
Stearine—
Rotterdam, 13 bls.
Tar Salts—
Hamburg, 11 cks.
Tartaric Acid—
Rotterdam. 10 kgs.
Tin Chloride—
Antwerp, 1 kg.
Ultramarine—
Rotterdam, 4 cks. 25 cs.
Waste Salt—
Hamburg, qty.
Wood Pulp—
Gefle, 3,506 bls.
Goth'burg, 5,044 3,000 bdls. 121 rolls 983 pks.
Montreal 1,980 2,096 bls.
Rotterdam, 84 rolls 50 bls. 39
Sarpsborg, 2,049 Kellner, Partington & Co.
,, 4,478
Skutskar, 1,469
Zinc Sulphate—
Rotterdam, 2 brls.
Zinc White—
Rotterdam, 6 cks.

HULL.

Week ending November 19th.

Albumen—
Riga, 10 cks.
Asbestos—
Hamburg, 1 ble. Bailey & Leetham, Ld.
Barytes—
Antwerp, 4 cks Bailey & 5 bgs. Leetham, Ld.
Bremen, 40 cks. G. Holmes & Co.
,, 23
Hamburg, 60 bgs. Bailey & Leetham, Ld.
Rotterdam, 44 cks. Hull & Netherlands S. S. Co.
Borax—
Bremen, 10 cks. Reckitt & Sons
Castor Oil—
Trieste, 10 cs. Wilson, Sons, & Co., Ld.
Chemicals (*otherwise undescribed*)
Antwerp, 7 pks. Wilson, Sons & Co., Ld.
Dunkirk, 20 dms. ,,

Hamburg, 12 cks.
Rotterdam, 2 cs. Hull & Netherlands S. S. Co.

Colours—
Antwerp, 6 cks Hanger, Watson, & Harris
Danzig, 11
Rotterdam, 54 9 cs, 1 bx. Hull & Netherlands S. S. Co. 4 pks.

Cryolite—
Copenhagen, 4 cks. Wilson, Sons, & Co., Ld.

Dextrine—
Stettin, 50 bgs. Wilson, Sons, & Co., Ld

Dyestuffs—
Alizarine
Rotterdam, 4 pks. Hull & Netherlands S. S. Co.
Extracts
Bordeaux, 30 cks.
Fiume, 150 brls.
Hamburg, 15 cs. Bailey & Leetham, Ld.
Indigo
Rotterdam, 7 chts. Hull & Netherlands S. S. Co
Shumac
Palermo, 231 bgs Wilson, Sons. & Co., Ld.
Trieste, 160 bls. ,,

Dyestuffs *(otherwise undes.)*—
Antwerp, 5 cks. Wilson, Sons, & Co., Ld.

Farina—
Amsterdam, 60 bgs. Hull & Netherlands S. S. Co.
Antwerp, 100 Wilson, Sons. & Co., Ld.
Harlingen, 610 bls. Hull & Netherlands S. S. Co
Stettin, 375 bgs. Wilson, Sons, & Co., Ld.

Glucose—
Rotterdam, 40 bgs. Hull & Netherlands S. S. Co.
Stettin, 100 Wilson, Sons, & Co., Ld.

Glue—
Antwerp, 8 cks Bailey & Leetham, Ld.

Naphthol—
Rotterdam, 2 cs. Hull & Netherlands S. S. Co.

Paint—
Christiania, 4 cs. Wilson, Sons, & Co., Ld.

Pitch—
Libau, 2 brls.

Plumbago—
New York, 7 cs. Wilson, Sons, & Co., Ld.

Pumice Stone—
Messina, 84 pks. Wilson, Sons, & Co., Ld.
,, 144

Soap—
Rotterdam, 8 cs. Hull & Netherlands S. S. Co

Soda—
Ghent, 123 bgs. Wilson, Sons, & Co., Ld.

Starch—
Antwerp 160 cs. Bailey & Leetham, Ld.
,, 160 Wilson, Sons, & Co., Ld.
Bremen, 282 Veltmann & Co.
Ghent, 222 Wilson, Sons, & Co., Ld.
New York, 100 bgs.

Stearine—
Rotterdam, 8 cs. Hull & Netherlands S. S. Co.

Sulphur—
Catania, 2,104 pks. Wilson, Sons, & Co., Ld.
,, 980

Talc—
Bordeaux, 60 sks.

Tallow—
New York, 130 tcs. Wilson, Sons, & Co., Ld

Tar—
Libau, 1 brl.
Rotterdam, 1 Hull & Netherlands S. S. Co.
Uleaborg, 1,850 J. Good & Sons
Wasa, 150 ,,

Tartar—
Bordeaux, 2 cks.

Tartaric Acid—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Turpentine—
Bordeaux, 5 brls.
Libau, 52

Ultramarine—
Bremen, 8 cks.

Waste Salt—
Hamburg, qty. Bailey & Leetham, Ld.
,, 100 bgs.

White Lead—
Amsterdam, 11 cks. Hull & Netherlands S. S. Co.
Antwerp, 23 Bailey & Leetham, Ld.
Rotterdam, 78 Hull & Netherlands S. S. Co.
23 cs.

Zinc Oxide—
Rotterdam, 19 cks.

GLASGOW.

Week ending November 24th.

Acetic Acid—
Rotterdam, 10 carbys. J. Rankine & Son

Alum—
Rotterdam, 14 cks. J. Rankine
10 bxs. & Son

Alumina Sulphate—
Rotterdam, 100 bgs. J. Rankine & Son

Barium Sulphate—
Antwerp 401 bgs.

Barytes—
Rotterdam, 84 cks. J. Rankine
65 pks. & Son

Bleaching Powder—
Rotterdam, 40 cks. J. Rankine & Son

Castor Oil—
Antwerp, 56 cks.

Chemicals *(otherwise undescribed)*
Rotterdam, 1 cs. J. Rankne & Son
Hamburg, 5

Colours—
Rotterdam, 40 cks. 3 cs. J. Rankine
177 pks. 2 brls. & Son

Cream of Tartar—
Barcelona, 6 cks.

Dyestuffs—
Alizarine
Rotterdam, 23 cks. 2 cs. 6 kgs. 1 bx. 64 brls. J. Rankine & Son
Aniline
Amsterdam, 4 cks. J. Rankine & Son
Rotterdam, 23 bxs. 4 cs. 83 bls. ,,
Aniline Colours
Hamburg, 4 cks.
Extracts
New York, 6 brls.
Philadelphia, 50
Indigo
Rotterdam 10 cs. J. Rankine & Son
Amsterdam, 7 chts. ,,

French Chalk—
Fiume, 100 bgs. P. M'Intosh & Co.
,, 500 Cunning & Co.

Gelatine—
Barcelona, 10 cks.

Glucose—
Philadelphia, 50 brls.

Glue—
Rotterdam, 60 bgs. J. Rankine & Son
New York, 95 brls.
Boston, 5

Hydrochloric Acid—
Hamburg, 1 carby.

Lead Acetate—
Rotterdam, 18 cks. J. Rankine & Son

Manganese Chlorate—
Rotterdam, 8 cks. J Rankine & Son

Naphthaline—
Hamburg, 1 ck.

Painters' Colours—
Antwerp, 10 cks. 5 cs.

Potassium Permanganate—
Rotterdam, 5 kgs. J. Rankine & Son

Potassium Prussiate—
Amsterdam, 8 cks.

Pyrites—
Huelva, 2,651 t. Tharsis Sulphur & Copper Co.

Soap—
New York, 50 cs.
Fiume, 51
Philadelphia, 600 bxs. 38 crts.

Soda—
Rotterdam, 13 cks. J. Rankine & Son

Starch—
Antwerp, 20 bgs. 360 cs.
Rotterdam, 13 J. Rankine & Son
Boston, 4

Stearine—
New York, 6 tcs.
Amsterdam, 93 bgs. J. Rankine & Son

Sulphate of Lime and Rock—
Antwerp, 1,526 bgs.

Tallow—
New York, 150 tcs.

Ultramarine—
Rotterdam, 10 cks. J. Rankine & Son

Varnish—
Antwerp, 2 cks.
New York, 9 brls.

Waste Salt—
Hamburg, 170 t. 1,350 bgs.

White Lead—
Rotterdam, 83 pks. J. Rankine & Son

Whiting—
Kunkerque, 80 t.

Zinc Oxide—
New York, 100 brls.

Zinc White—
Rotterdam, 35 cks. J. Rankin
30 pks. & Son

TYNE.

Week ending November 19th.

Alum Earth—
Hamburg, 66 cks. Tyne S. S. Co.

Antimony Ore—
Hamburg, 100 cs. Tyne S. S. Co.

Barytes—
Antwerp, 350 bgs. Tyne S. S. Co.

Chemicals *(otherwise undescribed)*
Hamburg, 5 cs. Tyne S. S. Co.

Colours—
Antwerp, 2 cks. Tyne S. S. Co.
Ghent, 4 brls. ,,

Cream of Tartar—
Rotterdam, 10 kgs. Tyne
4 cks. S. S. Co.

Paint—
Hamburg, 12 dms. Tyne S. S. Co.

Phosphates—
Abbeville, 140 t.

Soda—
Amsterdam, 201 bgs. Wm. Swanston & Son

Starch—
Antwerp, 20 cs. Tyne S. S. Co.
Rotterdam, 128 ,,

Wood Pulp—
Christiania, 192 bls.
Rotterdam, 52 Tyne S. S. Co.
Skien, 462

Zinc Oxide—
Antwerp, 35 brls. Tyne S. S. Co.

GOOLE.

Week ending November 16th.

Acetic Acid—
Rotterdam, 10 crbys.

Alizarine—
Rotterdam, 243 cks. 12 cs.

Aniline—
Rotterdam, 110 cks. 46 cs. 3 pks.

Barytes—
Rotterdam, 13 cks. 50 bgs.

Dyestuffs *(otherwise undes.)*—
Amsterdam, 3 cks.
Boulogne, 39 2 cs. 127 pks

Farina—
Hamburg, 150 bgs.

Glue—
Boulogne, 2 cks. 4 bs.

Indigo—
Rotterdam, 8 cks.

Lime—
Hamburg, 1 ck.

Logwood—
Belize, 525 t.

Phosphates—
Ghent, 1,008 bgs.

Potash—
Hamburg, 10 cks. 20 dms.

Saltpetre—
Antwerp, 85 bgs.
Hamburg, 20 kgs. 10 cs.
Rotterdam, 100 bgs.

Starch—
Ghent, 122 bxs.

Waste Salt—
Hamburg, 230 t. 805 cks. 610 bgs.

GRIMSBY.

Week ending November 19th.

Caoutchouc—
Antwerp, 4 cs. 1 blk.
Hamburg, 6
Rotterdam, 1

Chemicals *(otherwise undescribed)*
Hamburg, 4 cks.

Colours—
Antwerp, 9 cks. 3 cs. 120 pks.
Hamburg, 7 19 100
Rotterdam, 5 1

Farina—
Hamburg, 100 bgs.

Glue—
Antwerp, 1 ck.
Hamburg, 6

Starch—
Antwerp, 104 cs.

Varnish—
Antwerp, 1 cs.

Wood Pulp—
Sundswall, 756 t. 10 c.

Zinc Ashes—
Antwerp, 16 cks.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 23rd.

Ammonia—
Calcutta, 341 pks. (pt.) £222
Cologne, 14 dms. 72
Durban, 13 cs. 10 pks. 59

Ammonium Carbonate—
Stettin, 32 t. 14 c. £64
Yokohama, 2 47
Rouen, 2 15 65
Paris, 2 10 60
Dantzig, 25 kgs. 34
Bremen, 20 brls. 53

Ammonium Chloride—
Batoum, 1 t. £32
Shanghai, 1 49
Wellington, 10 253
Adelaide, 10 20
Cologne, 12 cks. 56
Hong Kong, 5 kgs. 23

Ammonium Sulphate—
Demerara, 25 t. 12 c. £242
Madras, 2 18 35
Jersey, 19 2 196
Antwerp, 53 550
Marseilles, 20 14 200

Arsenic—
Brisbane, 1 t. £17

Bleaching Powder—
Durban, 2 t. £18

Boracic Acid—
Rangoon, 5 c. £63

Borax—
Trebizonde, 11 c. £8
Sydney, 1 t. 2 18
Pt. Elizabeth, 10 cs. 49

Calcium Chloride—
Calcutta, 41 t. 15 c. £83

Carbonic Acid Gas—
Hong Kong, 7 cs. £32

Caustic Soda—
Pt. Elizabeth, 14 c. £10
E. London, 4 7
Melbourne, 1 t. 17 63
Durban, 2 8 55
Dunedin, 3 7
Normanton, 2 1 16
Hong Hong, 1 25

Chemicals (*otherwise undescribed*)
Calcutta, 40 kgs. 16 cs. £73
Stockholm, 1 17
Sydney, 8 61 pks. 330
Rotterdam, 10 kgs. 1 ck. 68
Hamburg, 25 3 192
St. John, N.B., 7 pks. (pt.) 18
Brisbane, 120 67
Gibraltar, 3 cks. 17
E. London, 30 cs. 22
Sourabaya, 1 15
Rosario, 5 16
Newport News, 25 185
Barcelona, 15 177
Rangoon, 23 18
Coconada, 6 40
Adelaide, 17 5 38
Hong Kong, 1 39
Perth, W.A., 43 56
Durban, 9 105
Melbourne, 20 75
Cape Town, 2 22
Pt. Elizabeth, 40 kgs. 37 450
Boston, 1 12 119
Tangiers, 1 18
Amsterdam, 16 36
Bombay, 5 54
Batavia, 1 10

Citric Acid—
Melbourne, 10 c. £63
Brisbane, 2 kgs. 14
Lisbon, 5 cks. 31
Rotterdam, 10 65
Durban, 8 49
Singapore, 2 13
Bilbao, 10 61
Calcutta, 3 cs. 15
Bombay, 3 27

Coal Products—
Alizarine
Wellington, 1 kg. / 5 cks. £123
Reval, 12 cs 560
Boston, 5 63
Pt. Chalmers, 6 32
Libau, 3 140
Aniline
Melbourne, 1 cs. £28
Adelaide, 1 5
Madras, 2 9
Anthracene
Salzaete, 131 cks. £381
Benzine
Yokohama, 20 cs. £34
Benzol
Boulogne, 50 cks. £127
Rotterdam, 22 dms. 250
Carbolic Acid
Hamburg, 37 cks. £310
Rotterdam, 34 dms. 286
Montreal, 20 63
Brisbane, 50 16
Bombay, 24 21
Yokohama, 500 1,483
Dusseldorf, 80 598
Sydney, 20 7
Creosote
Salzaete, 620 galls. £3
Dieppe, 200 cks. 69,383 436
Creosote Salts
Philadelphia, 634 bgs. £178
Dyes
Wellington, 12 cks. £56
Pitch
Durban, 30 cks. 8 brls. £26
Boston, 700 422
Hamburg, 60 200
Hong Kong, 688 420
Hochfeld, 145 t. 201
Antwerp, 1,570 1,778
Dunkirk, 575 715
Tar
Salzaete, 76,127 galls. £793
Adelaide, 150 dms. 28
Durban, 1,150 87
Hamburg, 200 brls. 83
Sydney, 110 21
Cape Town, 35 cks. 62
Pt. Elizabeth, 115 10
Nagasaki, 25 8
Melbourne, 10 13

Coal Products (*otherwise undes.*)—
Singapore, 40 dms. £39

Copper Sulphate—
Brussels, 4 t. 18 c. £89
Launceston, 1 16
Teneriffe, 10 9

Cream of Tartar—
Pt. Elizabeth, 2 c. £9
Sydney, 1 t. 74
Bowen, 4 16
Normanton, 5 20

Disinfectants—
Calcutta, 126 pks. £18
Madras, 4 kgs. / 6 cks. 28
E. London, 50 cs. 65
Durban, 3 25 99 / 40 pks (pt.) 200 dms. 219
Melbourne, 6 cks. 47
Wellington, 12 cs. 18
Penang, 130 pks. 92
Hong Kong, 40 209
Hamburg, 20 dms. 18

Glycerine—
Hamburg, 14 t. 11 c. £470

Manure—
Colombo, 60 t. £450
Cape Town, 398 8 c. 1,445
Demerara, 50 447
Landerneau, 225 14 1,020
Jersey, 180 8 1,005

Nitric Acid—
Channel Is., 14 carbys. £28

Oxalic Acid—
Karachi, 10 c. £12

Phosphorus—
Vera Cruz, 4 cs. £38

Potassium Bichromate—
Calcutta, 1 cs. £12

Potassium Cyanide—
Normanton, 10 c. £130
Calcutta, 5 65
Auckland, 100 510
Charters Towers, 30 283
Durban, 6 t. 20 821
Tampico, 100 587
La Paz, 200 1,224
Los Angeles, 100 530
Torres, 200 1,027
Townsville, 16 20 / 10 c. 2 042
Pt. Elizabeth, 1 10 171
E. London, 1 101

Potassium Chlorate—
Bombay, 15 cs. £55

Potassium Nitrate—
Barbadoes, 8 t. 4 c. £16

Potassium Prussiate—
Danzig, 31 cks. £602
Calcutta, 1 cs. 16
Yokohama, 1 t. 5 c. 75
Riga, 1 8 89

Saltpetre—
Rio de Janeiro, 8 t. 1 c. £168
Bahia, 5 112
Melbourne, 1 2 20
Durban, 11 11
Sydney, 4 91

Sheep Dip—
B. Ayres, 391 cks. 632 cs. £1,566
Launceston, 3 c. 7
Falkland Is., 13 345 dms. 436
Durban, 500 98
Gisborne, 5 6
Pt. Elizabeth, 9 t. 16 c. 350
Portland, M. 1 11

Soap Lye—
Hamburg, 50 dms. £492

Soda—
Boston, 3 t. 4 c. £17
Montreal, 1 4 62
Singapore, 2 18 12
Cape Town, 4 1 12

Soda Crystals—
Shanghai, 2 t. 14 c. £8
Pt. Elizabeth, 3 9 9
Newcastle, 30 78

Sodium Bicarbonate—
Durban, 13 c. £5
Marseilles, 10 t. 70

Sodium Carbonate—
Durban, 8 c. £11

Sodium Prussiate—
Antwerp, 14 t. 19 c. £683
Hamburg, 5 236
Riga, 2 11 122

Sodium Sulphate—
Ghent 50 t. £75
Gothenberg, 25 44
Norkopping, 150 225

Sulphur—
Barbadoes, 250 bgs. £11 3
Cape Town, 5 t. 48
Wellington, 2 8 c. 18

Sulphuric Acid—
Durban, 5 cs. £10
Madras, 2 c. 10

Tartaric Acid—
Pt. Elizabeth, 2 cs. £13
Brisbane, 5 30
Sydney, 10 c. 56
Melbourne, 10 55

LIVERPOOL.

Week ending November 23rd.

Alkali—
Rotterdam, 4 t. 13 c. 3 q. £18
Antwerp 1 1 5
Piræus, 4 1 1 16
Salonica, 7 13 2 30
Galatz, 1 16 8
Co fu, 9 9 38
Shanghai, 9 9 1 20
Boston, 12 16 90
San Sebastian, 10 1 40
Barcelona, 47 10 165
Trinidad, 9 7 3 20
La Guayra, 6 2 3 15
Natal, 1 6

Alum—
Pernambuco, 4 t. 18 c. £25
Galatz, 4 20
Alexandria, 1 8 7
Calcutta, 52 14 2 q. 265
Adelaide, 1 5
Melbourne, 2 10

Alumina Sulphate—
Portland, O., 10 t. 6 c. £40

Ammonium Carbonate—
Hamburg, 1 t. 10 c. £48
Varna, 5 7
Venice, 1 7 30
Havana, 1 5 29
Stettin, 5 1 q. 8
Christiania, 1 1 2 33
Genoa, 1 15 47
Gothenburg, 1 15 49

Ammonium Chloride—
Naples 11 c. £10
Galatz, 5 8
Venice, 10 15
Trieste, 5 t. 143
Montreal, 5 c. 1 q. 0
Philadelphia 21 3 3 413
Chalais, 2 2 4
Genoa, 6 2 9
Oporto, 2 cks. 8

Ammonium Sulphate—
Tarragona, 55 t. 16 c. £558
Cullera, 110 5 1,117
Valencia, 406 18 1 q. 4,076
Philadelphia 51 15 523
Santa Cruz, 10 101
Barcelona, 50 450
Demerara, 150 6 1,513
Gd. Canary, 10 100
Carthagena, 20 9 1 —

Basic Slag—
Granville, 450 t. £300
Fremantle, 388 12 c. 8 0
Adelaide, 25 53
Nantes, 49 10 245

Bleaching Powder—
Baltimore, 156 cks. 35 bxs.
Bombay, 6 cs.
Boston, 863
Corunna, 6
Leghorn, 14
Lisbon, 40
Mexico, 50
Milano, 28
Milwaukee, 1 2
Nantes, 16
Naples, 3
Newport News, 298
New York, 129
Pasages, 8
Natal. 60 dms.
Rotterdam, 61
San Sebastion, 100
Seville, 20
Trieste, 59

Bones—
Antwerp, 10 t. 5 c. £45

Boracic Acid—
Hamburg, 5 t. 3 c. 1 q. £12 8
Toronto, 1 1 3 3 0
Odessa, 1 4 3 9

Borax—
Rotterdam, 5 t. £70
Amsterdam, 8 5 c. 120
Algoa Bay, 1 15
Antwerp, 10 8
Toronto, 19 3 2 q. 288
Ibrail, 5 2 3 64
Sydney, 1 15
Vera Cruz, 10 7
M. Video, 6 1 5

Carbolic Acid—
Lagos. 8 dms. £7
Hamburg, 6 t. 11 c. 2 q. 408
New York, 8 13 1 624
10 cks. 10 cs.
Rio de Janeiro, 1 t. 18 c. 1 4
Yokohama, 2 10 15 9
Odessa, 6 2 2 4

Caustic Potash—
Baltimore, 1 t. 5 c. £32

Caustic Soda—
Adelaide, 10 dms.
Alicante, 50
Antwerp, 19
Bahia, 41
Barcelona, 242
Barranquilla, 10
Bombay, 20
Campeche, 10
Cartag'na N.G. 100 35 cks.
Chicago, 50 bxs. 25 brls.
Christiania, 5
Corunna, 4 6
Dakar, 100
Demerara, 5
Dunkirk, 35
Galatz, 15
Guatemala, 25
Hamburg, 49 10 cks.
Havana, 50
Hiogo, 141
Hong Kong, 33
Ibrail 169
Kavalla, 15
Madeira, 25
Malaga, 104
Malta, 30
Manila, 200
Melbourne, 80
Messina, 50
Oporto, 30
Pernambuco, 60
Philadelphia, 35
Piræus, 146
Pt. Adelaide, 37
Porto Alegre, 10
Pt. Natal, 25 c.
Rotterdam, 114
St. John's, 7
Salonica, 18
San Sebastion, 60
Santos, 30
Seville, 181 100
Sfax, 5
Singapore, 10
Sourabaya, 10
Sousse, 52
Sydney, 128

Tarragona, 40 10 cks.
Trieste, 49
Trinidad, 18
Vera Cruz, 106
Vigo, 15 10
Yokohama, 300

Chemicals (*otherwise undescribed*)
Johannesburg, 3 t. £290
Madras, 10 944
Odessa, 7 15 c. 205
Philadelphia, 1 17 25
B. Ayres, 16 128
Bombay, 50 brls. 235
Corfu, 3 9
Karachi, 5 24
Mersyne, 5 cks. 32

China Clay—
Baltimore, 250 cks.
Bombay, 148
Boston, 2,431
Leghorn, 1,000 bgs.
Madras, 54 cks.
Philadelphia, 179
Portland, M., 1,065

Citric Acid—
Victoria, B.C., 2 t. £13

Coal Products—
Aniline Oil
Barcelona, 54 cks.
Buda Pesth, 10 dms.
Philadelphia, 10
Aniline Salts
Bombay, 4 cks.
Smyrna, 10 brls.
Volo, 1
Creosote Oil
Bordeaux, 300 cks.
Dyes
Lisbon, 2 cs.
Oporto, 1 ck.
Naphtha
Melbourne, 50 dms.
St. John's, 23
Pitch
Conakry, 62 bxs.
Tar
Conakry, 20 brls.
Philadelphia, 100

Copperas—
Karachi, 29 t. 15 c. £80
Calcutta, 29 9 3 q. 59
Rodosto, 6 16 3 19

Copper Sulphate—
Amsterdam, 1 t. 1 q. £ 9
Batoum, 100 1 c. 3 1,903
Genoa, 5 1 2 90
Bordeaux, 10 1 172
Messina, 4 19 2 88

Dyestuffs—
Aniline Colours
Alexandria, 2 kgs.
Barcelona, 10 pks.
New York, 1 ck.
Philadelphia, 9 20 cs 1 brl.
Extracts
Barcelona, 32 cks. 10 cs.
Boston,
New York 1 kg.
Logwood
Sydney, 20 bgs.

Dyestuffs (*otherwise undescribed*)
Karachi, 5 pks.

Glycerine—
Santiago de Cuba, 2 c. £3
Pernambuco, 1 t. 1 3 q. 63
Seville, 15 37
Leghorn, 1 10 63
Genoa, 1 47
Shanghai, 4 10 263
Hamburg, 946 3 1,920
Yokohama 2 114
Hiogo, 4 10 190
Melbourne, 1 43

Iron Sulphate—
Piræus, 2 t. 1 c. £25

Magnesia—
Genoa, 2 cs.
Havana, 8
New York, 5 crts. 40
Paris, 75

Magnesium—
Rouen, 40 dms.

Magnesium Chloride –
Valencia, 1 t. £5

Magnesium Sulphate—
Montreal, 19 brls.
Piræus, 20 sks.
Vera Cruz, 1

Manure—
Penang, 50 t. £285
Barcelona, 5 52

Oxalic Acid—
Philadelphia, 10 t. 11 c £313

Paint—
Alexandria, 400 kgs.
Antwerp, 4 pks.
Arroya, 1 ck.
Bathurst, 180 kgs. 2 cks. 70 dms.
Beyrout, 15 brls.
C. Coast Castle, 9 cs.
Cape Town, 10 20
Coquimbo, 20
Demerara, 160 7 cks.
Ferrol, 8
Fiume, 150
Gibraltar, 15
Lagos, 80
Launceston, 2
Malta, 91
Manaos, 5 cs.
Nassau, 5 cks.
New York, 22
Odessa, 14
Para, 11 2 pks.
Rio G. do. Sul, 10
Rotterdam, 50 bgs.
St. Croix, 18
San Juan, 120
Santos, 7
Stettin, 50
Trieste, 200
Tripoli 15
Valparaiso 220

Painters' Colours—
Callao, 20 cks. 145 cs.
Manaos, 100 kgs.
Nassau, 2 32
Para, 3 tcs.

Paraffin Wax—
B. Ayres, 10 cs.
Fiume 10 bgs.
Palermo, 10
Patras, 6
Tetuan, 5
Venice, 50
Vera Cruz, 66

Phosphorus—
B. Ayres 14 c. £84
Santiago de Cuba, 2 29

Picric Acid—
New York, 1 t. 3 c. £120

Potash—
Pernambuco, 2 t. 9 c. £12

Potassium Bichromate—
New York, 2 t. 10 c. £66
Adelaide, 9 14
Vera Cruz, 16 1 q. 14

Potassium Chlorate—
Kalmar, 5 t. £150
Copenhagen, 11 333
Christiania, 2 60
Sydney, 5 151
Hiogo, 22 10 c. 672
Shanghai, 4 10 135
Para, 2 5
Libau, 12 0 389
Stettin, 13 15 41
Gothenburg, 8 254
Reval, 1 10 30
Santander, 1 49

Potassium Cyanide—
Melbourne, 1 t. 14 c. £150

Pottasium Stannate—
Bombay, 1 t. 1 q. £58

Salt—
Adelaide, 20 t.
Anamaboe, 10
Antwerp, 190
Baltimore, 550
Beyrout, 12
Brass, 30
B. Ayres, 50
Calcutta, 2,310
Cameroons, 83 14 c.
C. C. Castle, 18 19
Cape Town, 50
Carlton, 100
Conakry, 148 15
Ghent, 175
Gd. Bassa, 31 10
Halifax, 25
Havana, 9 16
Kansas, 40 12
Konillon, 46 15
Melbourne, 185
Montreal, 145
N. Orleans, 65 25 cs.
Newport News, 50
New York, 296
Philadelphia, 35
Rangoon, 395
Rotterdam, 80
Salt Pond, 12 10
Santos, 1
Sapeli 9 7
Sherbro, 100
Sydney, 353
Valparaiso, 11 1

Salt Cake—
Antwerp, 140 t. £178
Baltimore, 50 1 c. 87

Saltpetre—
Pernambuco, 13 c. 1 q. £14

Sheep Dip—
P. Ayres, 2,394 dms. £917
Calcutta, 60 2 cs, 44
M. Video, 8 t. 18 c. 2 q. 250

Soap—
Accra, 111 bxs.
Aden, 100
Adelaide, 30
Algoa Bay, 1,100 290 cs.
Antigua, 28 pks.
Assinee, 15
Bale, 40
Bangkok, 5
Barbadoes, 500
Berracoe, 50
Beyin, 50
Bilbao, 6 kgs.
Bluefields, 250 bxs.
Bombay, 210 35 brls. 30 cs.
Brussels, 1,825
Cairo, 2
Calcutta, 72
Cameroons, 50
Canaria, 940
C. C Castle, 124
Cape Town, 1,100
Calmar, 260
Cette, 10
Conakry, 100
Curacao, 25
Degama, 200
Delagoa Bay, 1,470 25 26 bdls.
Demerara, 2 000
E. London, 154
Fremantle, 800
Gothenburg, 200
Greytown, 550
Guayaquil, 300
Half Jack, 100
Hong Kong, 500
Kotonou, 20
Lagos, 378 1
Las Palmas, 595
Limon, 12
Loanda, 2
Madras, 20
Manaos, 1,070
Mannheim, 280
Matadi, 400
Melilla, 50
Menado, 100
Montego Bay, 51
Montreal, 3 brls.
M. Video, 1 cs.
Mossel Bay, 1,100
Para, 1,102
Penang, 10 100 dms.
Piræus, 1 14 pks.
Pt. Elizabeth, 250 8 350 bdls.
Pt. Natal, 2,321
Pram Pram, 50
Puerto Cortez, 40
Rangoon, 870
Rawal Pindo, 5
Rio de Janeiro, 11
Rotterdam, 100
St. John's, 175
St. Lucia 135
San Juan, 50
Santiago de Cuba, 100
Savanna'la Mar, 51 bxs.
Shanghai, 100
Sherbro, 800 1
Sierra Leone, 458 300
Singapore, 155 10
Smyrna, 10 cks
Sourabaya, 12
Sydney, 16
Teneriffe, 1,431
Trinidad, 250
Valparaiso, 4
Zanzibar, 200 bdls.

Soap Lyes –
Rotterdam, 79 dms.

Soda Ash—
Adelaide, 98 cks.
Antwerp, 750 bgs.
Baltimore, 120 19 tcs. 17
Barcelona, 105
Bombay, 55 kgs. 19
Boston, 56 brls. 200 bgs. 119
Brussels, 500
B. Ayres, 110
Cadiz, 6
Calcutta, 100 kgs. 162
Christiania, 1,150 bgs.
Corfu, 25
Delagoa Bay, 100 kgs.
E. London, 72
Ghent, 334 bgs.
Halifax, 20
Hiogo, 323
Leghorn, 40 20
Maranham, 80 70
Melbourne, 75
New York. 15 tcs 84
Pasages, 10
Piræus, 90 brls.
Pt. Adelaide, 47
Rio de Janeiro, 20
Rio G. do Sul, 430
Rosario, 100
Salonica, 60
Seville, 101
Skien, 50
Smyrna, 600
Syra, 50
Tampico, 50
Tripoli, 500
Valparaiso, 150
Venice, 300
Zante, 464

Soda Crystals—
Boston, 280 brls.
Constantinople, 50
Demerara, 60
Halifax, 28
Honolulu, 50
Jaffa, 12
Malta, 100
M. Video, 15 kgs.
New York, 300 420 cks.
Philadelphia, 140
Varna, 25

Sodium Bicarbonate—
Algoa Bay, 60 kgs.
Antwerp, 105 2 cks.
Barcelona, 70
Bombay, 250 10
B. Ayres, 18
Calcutta, 2,250 28 pks.
Christiania,
Delagoa Bay, 20 bgs.
E. London, 110 kgs.
Hamburg, 40
Havana, 25
Havre, 10
Hiogo, 600
Malaga, 25
Marseilles, 25
Melbourne, 120 4 cks.
Palermo, 25 2
Pasages, 75
Rangoon, 50
Rosario, 18
St. John, 700
St. John's, 40 50 dms.
San Jose de Guatemala, 50
Singapore, 8 cks.
Stettin, 20
Trieste, 100
Valencia, 70
Venice, 30 2
Vera Cruz, 40 bgs 70 kgs
Yokohama, 500

Sodium Chlorate—
Hamburg. 3 cks.

Sodium Silicate—
Corunna, 4 brls.
Warren, 10

Sodium Sulphate—
New York, 2 cks.

Sulphur—
Boston, 25 t. 1 c. £107
Demerara, 7 11 2 q. 45
Lagos, 6 2
St. John's, N.B., 11 4 1 51

Superphosphates—
Gd. Canary, 2 t. £4
Teneriffe, 10 25
Valencia, 25 64

Varnish —
B. Ayres, 2 kgs. 11 cs. 44 dms.
Demerara, 2 7
Genoa, 5 brls. 2
La Guayra, 1
Launceston, 1
Manila, 5
Mollendo, 3
Seville, 4

White Lead—
Algoa Bay, 240 dms

Zinc Chloride—
Bombay, 11 t. 10 c. £180
Genoa, 1 11 2 q. 17

MANCHESTER.

Week ending November 23rd.

Alum—
Tunis, 5 brls.

n Chloride—
10 cks.
20
lours—
26 kgs.
da—
218 dms.
30
25
20 brls.
(otherwise undescribed)
200 brls.
75
ucts—
Oil
9 tins 11 dms.
Salts
10 brls.
27 pns.
5 cks.
ylamine
26 cks.
850 t.
1,035
ts
wo, 65 bgs.
20 dms.
240 brls.
20 cs.
1 15 crbys.
Vax—
2 cs.
20
n Bichromate—
40 brls.
4 brls.
220 t.
15 brls.

HULL.

nding November 19th.

m Sulphate—
200 bgs.
250
g Powder—
180 cks.
40
oda—
24 cks.
504 dms.
s *(otherwise undescribed)*
75 cks. 5 cs.
10
3 954 slbs.
33 pks
25
40
12 85 182 slbs.
8 pks.
40 225 20
39 47
110
1,200 bgs. 220
33 cks.
20 1
ed Oil—
698 c.
819
87
17
388
209
11
202
1,082
1,445
135
500 brls.
(otherwise undescribed)
24 cks.
5 bgs.
71 cks.
Oil—
36 c.
138
23
87
976
51

Ochre—
Dunkirk, 2 cks.
Paint—
Drontheim. 2 cks.
Painters' Colours—
Amsterdam, 15 cks.
Antwerp, 111 13 cs 105 pks
Bremen, 3
Christiania, 24
Constantinople, 3
Drontheim, 4
Ghent, 2
Gothenburg, 1
Hamburg, 6 3
New York, 213
Rotterdam, 23 2 5
Stettin, 25
Phosphates—
Bordeaux, 236 t.
Pitch—
Antwerp, 244 t.
Soap—
Amsterdam, 86 cs.
Bergen, 1
Christiania, 1
Hamburg, 1
Rotterdam, 50
Starch—
Odessa, 630 cs.
Tallow—
Hamburg, 53 cks.
Tar—
Amsterdam, 12 cks.
Antwerp, 10
Hamburg, 7
Varnish—
Antwerp, 3 hhp s.
Ghent, 3 cks. 2 cs.
Hamburg, 1
Stettin, 9
Stockholm, 6 5

GLASGOW.

Week ending November 24th.

Acids—
Rangoon, £38
Ammonium Chloride—
Italy, £98
Ammonium Sulphate—
Barcelona, 186 t. 6 c.
Demerara, 446 8
Hamburg, 50 14
Italy, 10 2½
Jersey, 100 14¾
Martinique, F.W.J., 153 7
Valencia, 237 16¾
Bleaching Powder—
Calcutta, 35 t. 1¼ c
Borax
E. London, £126
Carbolic Acid—
Brisbane, £36
Chalk—
B. Ayres, £38
Chemicals *(otherwise undescribed)*
Jersey, 520 t. 1 c.
Coal Products—
Creosote Oil
Bordeaux, £1,000
France, 825
Naphtha
France, £27
St. Nazaire, 20 brls.
Pitch
Antwerp, £318
Canada, 48
Danzig, 104 t. 14 c.
Hamburg, 12
Tar
Calcutta, £334
Canada, 50
Danzig, 76 t.
Madras, 156
Rangoon, £28 17s.
Copperas—
Bombay, £70
Dextrine—
Italy, £120
U.S.A., 218
Dyestuffs *(otherwise undes.)—*
Hamburg, £13 9s.
Extracts—
Belgium, £56
Farina—
Amsterdam, 5 t. 7 c.
Lime—
Cape Town, £65 5s.

Linseed Oil—
Brisbane, 2 t. 7½ c.
Manganese (Recovered)—
Antwerp, £30
Manure—
Trinidad, 83 t. 14 c.
Paint—
Brisbane, £403
Calcutta, 31
St. John's, N'fd., 30
Painters' Colours—
Alexandria, £44 12s.
Cairo, £52
Calcutta, £188 11s.
Cape Town, £253
E. London, £43 16s.
King William's Town, £20
Rangoon, £161 14s.
Trinidad, 338 18
Paraffin Wax—
Barcelona, £551
Christiania, 66
Fiume, 325
Genoa, 54
Leghorn, 208
Marseilles, 24
Potassium Bichromate—
Amsterdam, £278
Antwerp, 120
Brussels, 67
Genoa, 675
Leghorn, 166
Philadelphia, 398
Potassium Cyanide—
Madras, £454
Potassium Sulphate—
Jersey, £80
Red Lead—
Brisbane, £47 13s.
Salt—
Brisbane, 497 t. 14 c
Sheep Dip—
B. Ayres, £509
Slag—
Jersey, 20 t.
Soap—
Calcutta, 1 t. 8½ c.
Durban, 3 0
Johannesburg, 2 10½
Sodium Bichromate—
Brussels, 2 t. 10¾ c.
France, 1 3½
Genoa, 6 13¾
Sulphuric Acid—
Rangoon, £339
Tallow—
Italy, 1 t. 13¼ c.
Tin Crystals—
Trinidad, £290
Varnish—
E. London, £38
Rangoon, £12 6s.
White Lead—
Johannesburg, £72

TYNE.

Week ending November 19th.

Alkali—
Amsterdam, 20 t. 14 c.
Ammonium Carbonate—
Stockholm, 1 t.
Ammonium Chloride—
Gothenburg, 4 t. 9 c.
Antimony—
Hamburg, 10 c.
Montreal, 2 t.
New York, 9
Rotterdam, 3
Barium Binoxide—
Antwerp, 11 t. 7 c.
Barytes—
Hamburg, 168 t. 10 c.
Bleaching Powder—
Amsterdam, 15 t. 13 c.
Antwerp, 5
Christiania, 5
Copenhagen, 20 5
Drontheim, 9 17
Gefle, 15
Gothenburg, 86 4
Hamburg, 13 17
Horsens, 2 10
New York, 12 12
Rotterdam, 5 3
Bones—
Hamburg, 5 t. 8 c.

Borax—
Ergasteria, 13 c.
Castor Oil—
Montreal, 19 t. 7 c.
Caustic Soda—
Christiania, 2 t. 18 c.
Copenhagen, 10 14
Gefle, 10 3
Gothenburg, 115
Hamburg, 77 14
Rotterdam, 43 10
Stockholm, 4 18
Fluor Spar—
Gothenburg, 47 t. 9 c.
New York, 152 5
Glue—
Montreal, 1 t.
Litharge—
New York, 2 t. 10 c.
Stockholm, 10 14
Magnesia—
Hamburg, 4 t. 17 c.
Paint—
Ergasteria, 11 c.
Hamburg, 2 t. 15
Montreal, 2
Rotterdam, 1 10
Soda—
Amsterdam, 40 t. 4 c.
Christiania, 10 1
Gothenburg, 7 14
Stockholm, 85
Soda Ash—
Gothenburg, 163 t. 6 c.
Hamburg, 7 18
Rotterdam. 3 2
Sodium Hyposulphite—
New York, 22 t. 6 c.
Sodium Sulphate—
Helgenas, 300 t.
Gothenburg, 205 15 c.
Sulphur—
Gothenburg, 55 t.
Sannesund, 350
White Lead—
Copenhagen 5 c.
Montreal, 26 t. 15
Stockholm, 12 18
White Lead (and Red)—
Gothenburg, 7 t. 5 c.
Zinc White—
Montreal, 6 t.

GOOLE.

Week ending November 16th.

Chemicals *(otherwise undescribed)*
Amsterdam, 20 cks.
Ghent, 2 1 cs.
Coal Products *(otherwise undes.)—*
Amsterdam, 50 cks.
Antwerp, 1 1 cs. 1 dm.
Boulogne, 1 5
Ghent, 1 2
Hamburg, 1
Rotterdam, 6
Dyestuffs *(otherwise undescribed)*
Hamburg, 94 cks. 1 dm.
Painters' Colours—
Antwerp, 1 ck. 3 cs.
Ghent, 1
Rotterdam, 3
Pitch—
Antwerp, 371 t.

GRIMSBY.

Week ending November 19th.

Alkali—
Dieppe, 1 ck.
Hamburg, 10 cs.
Caoutchouc—
Dieppe, 1 pk.
Gothenburg, 1 ble.
Malmo, 2 bs.
Chemicals *(otherwise undescribed)*
Dieppe, 11 cs.
Malmo, 6 cks.
Coal Products *(otherwise undes.)—*
Dieppe, 91 cks. 30 brls.
Hamburg, 1 cs. 10 btls.
Dyestuffs *(otherwise undescribed)*
Dieppe, 1 kg. 4 pks.
Painters' Colours—
Antwerp, 1 pk.
Hamburg, 1 ck.
Rotterdam, 4 kgs.

PRICES CURRENT.

WEDNESDAY, Nov. 30, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9 & 8/3		
,, Glacial .. .. ,,	35/-		
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	17	6
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/- & 33/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	0	0
,, ,, (grey) Hull .. .. ,,	10	0	0
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¾
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	4	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/- to 25/-		
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8½
,, 50/90 ,, ... ,,	0	0	8½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. per gallon	0	0	11
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	55	17	6
,, Sulphate .. .. ,,	18	10	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	25	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	10	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	15	0
Linseed .. .. ,,	17	10	0
Stearine .. .. ,,	25	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	14	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	5	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	15	0
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3⅛
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,,	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	7	6
,, Acetate (ex-ship) .. .. ,,	12	5	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Borate (Borax) .. .. nett per ton	14	10	0
,, Bichromate .. .. per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	4⅜
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	0
,, ,, (Glauber's Salts .. .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5⅜
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	7	6
,, (Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	22	10	0
Tin Crystals .. .. per lb.	0	0	5⅜
,, English Ingots .. .. per ton	85	10	0
Zinc (Spelter) .. .. ,,	24	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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AND

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VERTISEMENTS.

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PATENT *v.* PUBLIC RIGHTS.

THE British Patent Laws, their faults, and the possibilities of amending the latter, have been freely discussed during the last three years, and this ventilation of grievances has done much to educate public opinion upon a matter which closely affects the interests of the British public.

The prominence which this subject has attained of late, has, in a large measure, been due to the strenuous efforts made by one particular industry to protect itself against the abuse of our Patent Laws by foreign competitors.

The voice of complaint reached the ears of Parliament, and by discussion in the House the question progressed through the stages of restricted interest until it developed into one of general interest, influencing the public welfare.

We followed step by step in these columns the labours of those who thus fought and won the battle for compulsory licences, and this week, in the course of a general survey of the Patent Laws and their bearings on public weal, the wisdom of these warriors was confirmed by Mr. Fletcher Moulton.

The occasion for this confirmation of policy presented itself during a discussion by the Article Club on the Patent Laws and the Community, when, of course, a very wide aspect of these laws had to be taken.

The sketch of the influences of the Patent Laws as given by Mr. Moulton from this bird's-eye point of view was very instructive. He was of the general opinion that as a whole the laws operated beneficially, and he was in favour of all disputes upon the question of whether a patentee was abusing his rights being settled by a jury and not a judge.

It is easy to emphasise the obvious injustice of one man controlling certain discoveries in a manner which prohibits the public from participating in the benefits he can confer, and the citation of telephones as a supposititious instance was at first sight convincing, but on reflection it raises doubts concerning the entire justice of our Patent Laws.

In extreme cases the claims of the community are paramount to all personal claims; but in reality is not this subjugation of individual interests contrary to the underlying principles of these laws? In the cases of minor importance —and they constitute a vast majority—the object of a patent is that the man who by his own inventive genius has facilitated existence, locomotion, or manufacturing operations, shall secure the benefit for himself, by refusing the enjoyment of these facilities to all who will not pay him a consideration in the way of royalties.

Now Mr. Moulton contends that it is not the patents which go into the Law Courts that are hurtful to the trading community, but the "threats held out with regard to infringements." But when a man has invented much and patented more, at a great cost in expenses and fees, if he may not use his patents as scare-crows to keep off the flocks of brain-picking hawks that hover over every valuable patent (by

making them the basis of threats against infringers) of what value are his patent rights to him? He might have done better by saving his patent fees and vending his newly-discovered facilities to haphazard customers in the open market.

Again, Mr. Moulton in eulogising the existing laws bids us remember that the reward is "automatically proportioned to the value of the achievement;" but is it? The small inventor's claims do not clash seriously with the interests of the public; he enforces his patent rights and reaps his reward. Then comes some genius, who, after years of labour, completes an invention of superlative merit, destined to revolutionise ordnance, ammunition, transportation, or some trade. He naturally sets a superlative value on his discovery, and demands what appear to be very heavy royalties when paid collectively by the Nation. The public declines to be "bled." His patent is opposed to the rights of the Nation and the best service of the community, and his patent must be forfeited.

Or even supposing the matter gets so far as a question of compensation for enfranchising his invention. Then a jury adjudicates—a jury which will benefit by purchasing the patent rights at a bargain—and the inventor is awarded a sum which is certainly not in proportion to the "value of the achievement," when compared with the profits made by the inventor of a new safety pin, or hair curler.

It is a sorry recompense for the "patient, devoted attention" of years, which Mr. Moulton admits inventors give to their work.

For years we have sought for a non-poisonous, and safe strike-anywhere match. Apparently we are on the eve of its discovery. The claims of the public safety and welfare will, we admit, be supereminent to the exclusive interests of the individual, but the discovery merits superlucrative reward—will such reward be "automatically proportioned to the value of the achievement?" We grant the many virtues of our Patent Laws and the failing of the foreign methods some would substitute, but all the same, even if our laws are approaching pratical perfection, it is as well to prick the bubbles when they become too inflated with superabundant self-satisfaction.

Reports of Companies.

THE LAGUNAS SYNDICATE, LTD.

The directors of the Lagunas Syndicate, Limited, in their report for the twelve months ended June 30th last, state that the profit and loss account shows a gross profit of £35,737. Debenture interest, premium on drawn debenture bonds, general charges, loss in exchange, and the sum of £1,000. written off preliminary and debenture issue expenses have absorbed £14,799. of the gross profits, which leaves £20,938. to be carried to the balance-sheet. Adding to this £2,009. the balance of the profit and loss from the previous account, and deducting £15,000. for debenture bonds redeemed, there remains a net balance of £7,947., which the directors recommend to be carried forward. During the twelve months under review only one of the syndicate's oficinas has been working, and has produced 1,250,000 quintals of nitrate. A printed copy of the judgment of Mr. Justice Romer in the action brought by the Lagunas Nitrate Co., Limited, against the syndicate and others was sent at the time to every shareholder. The shareholders are therefore aware that this litigation has resulted in favour of the syndicate, the claim for the rescission of the contract having been set aside and the claims for damages having been all decided in favour of the syndicate, except in respect of the five months' delay which took place in getting the water supply into proper order and the few weeks' delay in the completion of the second half of the oficina, and on these points an inquiry as to the amount of damages has been directed. The plaintiff company is, however, appealing against Mr. Justice Romer's judgment. The directors regret that the expenses of this litigation have been so large, but, being defendants, the syndicate had little or no control over the expenditure, which Mr. Justice Romer characterised as excessive.

CASSEL GOLD EXTRACTING CO., LTD.

The directors, in their report for the year ended September 30th last, state that the results of the year's working are, in their opinion, satisfactory. The formal assent of the court to the reduction of capital was given on March 18th and registered on March 25th, and as soon as possible thereafter an approximate statement of the company's financial position was prepared. In the opinion of the board, it justified the payment of a dividend at the rate of 10 per cent. on the reduced capital, which was accordingly paid on May 12th. After writing off £4,744. for depreciation of patent rights, land, buildings, machinery, and plant, and adding £3,500. to the suspense share account, the amount at credit of profit and loss account is £14,549. The directors recommend that out of that sum a dividend of 15 per cent., free of income-tax, be paid on December 29th, to all shareholders on the books of the company on December 19th, which will absorb £8,812., that £3,500. be placed to the reserve fund, and that the balance of £2,237. be carried forward to next year. There has been no particular alteration in the affairs of the African Gold Recovery Company since the last report. The directors understand that the improvement in the royalty business of the American company, which was referred to in last report, has been maintained and increased during the year, and that the Metallic Extraction Company, in which the American Company is largely interested, is reported to be doing remarkably well The directors are informed that the royalty and general business of the Australian Gold Recovery Company has made satisfactory progress during the year, but the difficulties with the mining interests in regard to royalty in several of the colonies have not yet been entirely surmounted. Good hopes of a successful issue are, however, stated to be entertained. The Mexican Gold and Silver Recovery Company also reports that its royalty and mining business has been doing well during the year. Its mining properties have shown satisfactory development, which is very hopeful. A good royalty contract with a company about commencing operations on a large scale has just been arranged; and other business appears to be opening up. The plant at Taltal, which we intimated in our last report had been sent out, has since been erected, and has been doing good work for some months. The Alhué Company's position has continued to improve, and they have been paying dividends regularly. The mines also have been opening out well.

The plant for treating 20 tons per day, referred to in last report, has since been erected and has been running for some months, and the bullion returns are beginning to come to hand. The companies in India using the process and paying royalty are: Mysore, Champion Reef, Goldfields of Mysore, Nundydroog, Coromandel, and Nine Reefs, the additional royalty-payer since last report being the Nine Reefs Company. The cyanide plant at Punjom has continued in operation, but not with perfect regularity, owing principally to the death of the cyanide chemist and to lack of water. A new chemist has been appointed, and the water difficulty is in a fair way to be removed. A strong judgment in favour of our application to amend has been obtained in the Court of Appeal, and, as a consequence, negotiations were opened with the New Zealand Government for the purchase of the patents for £15,000., subject to the confirmation of the New Zealand Parliament. These negotiations were continued for some months, and the Government's proposal to buy the patent was keenly contested in both the Lower and Upper Houses of Parliament. The Government did not find itself strong enough to carry the Bill through, but a compromise was proposed, by which we were to receive £10,000. This was carried, and the sum, less the various heavy expenses which had been incurred, was paid to us. Our agency there has now been closed. The company's business in cyanide, notwithstanding keen competition, has been satisfactory during the past year. Owing to the increasing demand for our make, which in quality ranks high in the market, and with the view of arranging the works at Maryhill on a permanent and more economical basis, the board, during the past year, acquired, on feu, ground adjoining the existing premises, and operations are in progress for an extension of the works there. When these are completed the company, it is anticipated, will be in a position to fully meet any market requirements. The works at Kinning-park have been kept busy for some time past with orders for cyanide plant, in addition to the examination of samples, etc.

Estimating Boric Acid in Butter.—1. Fifty grms. of butter are well washed with 20 c.c. of warm water. 2. The washings, nearly always acid, are saturated with a few drops of decinormal soda in the presence of sensitive litmus. 3. The blue liquid is divided into two test-tubes 4. To one of these test-tubes we add 1 or 2 grms. of mannite, the other tube serves as a check. In the presence of boric acid the tube containing mannite takes an intensely red colour. With this solution we carry out the estimation by the use of decinormal soda, until the sudden appearance of the blue colour, when the number of c.c. of decinormal soda multiplied by 0·0062 will represent the weight of the boric acid contained in the sample.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Making Portland Cement from Chalk and Marl. A. J. Keeble and G. H. Innes. 24,491. November 21.

Improved System for Purification of Town Sewage. E. Finch. 24,503. November 21.

Apparatus for Sterilizing Liquids by Ozone. H. Tindal. 24,542. Nov. 21.

Apparatus for Generating Ozone. H. Tindal. 24,543. November 21.

Bleaching Paper Pulp. J. Almond and F. Andrews. 24,620. November 22.

Drying Vegetable Refuse. E. Löwi. 24,628. November 22.

Producing Artificial Asphalt. A. E. Alexander. 24,629. November 22.

Producing Artificial Asphalt. A. E. Alexander. 24,630. November 22.

Producing Lime and Obtaining Carbonic Acid. H. C. Bull, A. C. Oakes, T. M. Thom. 24,643. November 22.

Extracting Oil from Seeds, etc. G. Mitchell. 24,740. November 23.

Improvements in Tanning. J. V. Koch. 24,844. November 24.

Alloy of Aluminium and Magnesium. A. G. Brookes. 24,878. Nov. 25.

Oxygen Gas Generators. W. Riley and A. Kershaw. 24,885. November 25.

Shale Retorts. W. Young and J. Fyfe. 24,891. November 25.

Tanning Hides, etc. T. H. L. Bake. 24,903. November 25.

Preparation of Hydrocyanic Acid and Cyanogen Compounds by Electrolysis. R. Bayer. 24,905. November 25.

Making Calcium Carbide. H. Walker. 24,909. November 25.

Manufacture of Sulphuric Anhydride and Sulphuric Acid. W. P. Thompson. 24,933. November 25.

Obtaining Small Sodium Carbonate Crystals. J. Dekker. 24,978. November 26.

Sewage Precipitation Process. W. P. Thompson. 25,000. November 26.

Treating Platinum Ore Residues. L. Moris. 25,015. November 26.

Treating Bichromate of Soda. A. Goldschmidt. 25,020. November 26.

Manufacture of Baryta. H. H. Lake. 25,017. November 26.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in or Connected with Electrolytic Cells. G. and G. W. Bell, both of 97, Newsham Drive, Newsham Park, Liverpool. Eng. Pat. 25,890. November 8, 1897.

Mercury is used as a cathode, and is caused to pass from the decomposing and oxidizing partitions of the cell by the pressure of the gases generated. Thus by regulating the chlorine and hydrogen exits, the mercury is caused to flow to and fro. Several ways of constructing the cell may be followed, and are illustrated by four figures. In any case it is constructed so as to employ very thin layers of mercury.

Improvements in or Connected with Apparatus or Plant for the Manufacture of Sulphate of Ammonia from Ammoniacal Liquors. I. Carr, Anne-street East, Widnes, Lancs. Eng. Pat. 16,978. August 6, 1898.

This is an improved form of superheater, in which the heating area is increased sufficiently to remove practically all the heat from the waste saturator gases, and leave them fit to go direct to the purifiers or sulphur recovery kilns. In each liquor section, pipes are fitted, which carry off any gases generated from the liquor as it passes through the heater, these pipes being fixed at levels which do not interfere with the flow of liquor itself. An additional advantage claimed is that the long and continuous heating facilitates the conversion of the cyanides into ammonia, when the liquor has previously been mixed with an alkaline solution. There are three figures.

Improvements in Treating Lead containing Precious Metals. W. Feit, Langelsheim a/Harz, Germany. Eng. Pat. 16,735. August 2, 1898.

Argentiferous lead is used in the reduction of nitrates to nitrites, when, in addition to the latter compound, oxide of lead is formed, and the metallic lead, which remains unoxidized, contains all the silver, &c., which was originally present. The separation of the lead rich in silver may be attained by dissolving the oxide in acid, preferable acetic, when lead acetate is obtained. By another method, the lead is converted into sulphide by heating with sulphocyanide of potassium, when cyanide of potassium and lead sulphide are formed, leaving a small amount of metallic lead rich in silver (and gold if present). The separation of the argentiferous lead may be effected in any suitable way.

Improvements in the Treatment of Metallic Carbides. W. L. Wise, 46, Lincoln's Inn Fields (communicated by The International Patent Company, 46, Von Buren-street, Chicago, Ill., U.S.A.). Eng. Pat. 18,110. August 23, 1898.

Calcium carbide, as it comes from the furnace, contains a certain amount of free lime. It is sieved and graded and the grades proportioned, as the coarser portions are acted on more quickly by water. The graded mixture is introduced into a hot bath of tallow or oleic acid, &c, and stirred until it forms a paste. This is moulded while hot, and is then ready for use. In order to prevent frothing, resin and beeswax may be added. Thus in practice a suitable mixture has been found to consist of oleic acid (red oil) 12·5 %, beeswax, 3 %, resin, 6·5 %, and calcium carbide, 78 %. The oleic acid is saponified by the free lime and forms a binding agent for the mixture. If the crude carbide is deficient in free lime, enough is added to ensure saponification.

Improvements in the Manufacture of Resinous Soap. F. Arledter, Perlen, near Luzern, Switzerland. Eng. Pat. 22,862. October 5, 1897.

The soap is specially applicable for the resin sizing of paper. A mixture of alkali, starch, resin, petroleum, water, and carbon dioxide is heated under pressure in a closed vessel, provided with a stirring arrangement. It is claimed that much less alkali is required in boiling the soap by this method, and the percentage of liberated resin (which is mainly instrumental in sizing) is increased.

SOAP TRADE AMALGAMATION.—The Maypole Soap Company, Ltd., has purchased the soap-making plant and business of Roger le Beau et Cie, Ltd., of Cumming-street, London, and Paris who are the successors of the old firm of Napoleon Price and Co., Ltd., originally Price and Gosnell.

CARBOLIC ACID POISONING.—At Macclesfield, this week, a silk winder, named Margaret Heaver, died from the effects of drinking carbolic acid in the morning. Deceased was staying at a friend's house in Silk-street, and drank the carbolic acid, which was in a coal place, under the belief that it was vinegar, which she had been taking for bronchitis. An inquest was held.

MESSRS. DOULTON AND CO.—This firm has turned their business into a limited liability concern this week, with a capital of £1,100,000, divided into 400,000 ordinary £1. shares; 350,000 5 per cent. cumulative preference shares of £1. each; and 350,000 first mortgage 4 per cent. irredeemable debenture stock. Only 233,334 preference, and the same number of debenture shares, were offered to the public.

MANCHESTER PETROLEUM TRADE.—The direct tank-oil trade at the port of Manchester continues to grow, and considerable quantities of oil are coming forward by tank steamers from Russia and America. The latest entries at the port are two steamers of the Anglo-Caucasian Oil Company, Limited, from Batoum. These are the Rocklight and Borjom, both "tankers" well known on the Ship Canal. About 1,000,000 gallons of petroleum were being landed by the Borjom, and the Rocklight had 1,500,000 gallons on board. Their combined cargoes of 2,500,000 gallons constitute a record consignment to one company since the canal opened.

AN ABSCONDING BANKRUPT.—On Tuesday, at the London Bankruptcy Court, a sitting was held before Mr. Registrar Linklater for the public examination of Claude Vautin, described as a metallurgist, lately carrying on business at 66, Old Broad-street, and residing at St. John's Wood. The bankrupt absconded an October 27th, and it was alleged that he had obtained possession of valuable securities by trickery and fraud. An order for his prosecution was made by the Court, and he has been arrested abroad. The Official Receiver reported that the bankrupt would shortly be brought back, and in the meantime an adjournment was necessary. No statement of affairs had yet been furnished. The hearing was accordingly adjourned.

RAW SEWAGE IN THE IRK.—Before Messrs. T. Ramsbottom and Joseph Ashworth, at the Middleton Police Court on Monday, the mayor, aldermen, and burgesses of the borough of Middleton were summoned on four charges by the Mersey and Irwell Joint Committee for polluting the River Irk, by permitting raw sewage to flow therein. Mr. Wilson appeared for the Committee, and said an inspector had visited the sewage works on the evening of the 4th of October, and found the place deserted and raw sewage flowing unchecked into the river. It was the duty of the Corporation to have men on duty night and day. They couldn't expect sewage treatment to go on automatically. Another summons dealt with the delay of the Corporation in completing the coupling up of the sewers. Mr. Entwistle, Town Clerk of Middleton, said the fact that the Corporation had spent £40,000. was an indication they were doing something. They were only anxious to do what was right, but must have time. Six months was allowed to complete the work.

A COMPARISON OF AMERICAN AND RUSSIAN PETROLEUMS.

A SIDELIGHT ON THE GERMAN LOW FLASH STANDARD.

THE value of American and Russian petroleum as illuminants has of late become the subject of much comment in technical and trade circles of Europe. A commercial news agency, at Hamburg, recently published an article rather unfriendly to the Russian product, and it is this article which is refuted very energetically by Dr. M. Albrecht, in *Chemische Revue*.

In the first place, he denies the assertion that Russian petroleum produced unpleasant vapours while burning. "These vapours," Dr. Albrecht contends, "are caused only by an imperfect combustion of the oil. If provision be made for well-regulated, perfect combustion, by proper air supply and proper regulation of the wick, well-refined Russian petroleum smells just as little in burning as American oil. spilled on the metal parts, and not thoroughly removed before lighting, the oil evaporates as soon as the metal becomes warm, without burning, and then it will produce very unpleasant vapours."

Dr. Albrecht further disputes the assertion that specially constructed burners were required for Russian petroleum. "Burners," he says, "have been constructed for years with so ample an air supply that all of them can be used for Russian oil. In case of the old round burners, it is only necessary that the neck of the chimney is not too far above the edge of the burner, not more than about ¾ inch. If higher than that, the air around the flame does not become hot enough, that is, it is not preheated sufficiently for effecting perfect combustion. The German-Russian Naphtha Import Company (Nobel) supplies its customers with chimneys which, above the neck, are of reversed conical shape, and by means of which a very white light is produced from Russian oil."

"It is also a well-known fact," he continues, "that the components causing the luminousness of the flame of both oils are the same in

TABLE I.

	American Petroleum. "Standard White,"		Russian Petroleum. "White Star."			Russian Nobel Petroleum Baden Testing Station.
	Thoerner.	Skalweit.	Thoerner.	Skalweit.	Baden Testing Station.	
1. Specific gravity at 15°C.	0·7978	0·8078	0·8188	0·8182	0·819	0·825
2. Flash point (Abel)	24·9° C.	22·50° C.	30·9° C.	29·5° C.	30·2° C.	30° C.
3. Distillation—						
(*a*) Light oils passing up to 150° C.	12·5 p. c.	11 p. c.	6 p. c.	4 p. c.	10·5 p. c.	15·5 p. c.
(*b*) Burning oil proper from 150 to 300° C.	67 5 p. c.	63 p. c.	92 p. c.	93 p. c.	86 p. c.	79·5 p. c.
(*c*) Residue or heavy oil passing above 300° C.	20 p. c.	26 p. c.	2 p. c.	3 p. c.	3·5 p. c.	5 p. c.
	100 per cent.	100 per cent.	100 per cent.	100 per cent.	100 per cent.	100 per cent.
4. Determination of illuminating power	5·9 normal candles on ordinary round burners, using 21·85 grams of oil in three hours,	10 normal candles on ordinary round burner, using 36·2 grams of oil in three hours.	6·6 normal candles on ordinary round burner, using 22·5 grams of oil in three hours.	12·5 normal candles on ordinary round burner, using 40·2 grams of oil in three hours.	10·7 normal candles on large Kosmos burner, using 51 grams of oil in three hours.	9·5 normal candles on large Kosmos burner, using 47·3 grams of oil in three hours.
5. Oil consumption per nominal candle and hour	3·70 grams.	3·62 grams.	3·41 grams.	3·22 grams.	3·17 grams.	3·33 grams

TABLE II.

	American Petroleum. "Standard White."				Russian Petroleum. "White Star."
	Hamburg I.	Hamburg II.	Bremen.	Harburg.	
1. Specific gravity at 15° C.	0·797	0·7998	0·798	0·7082	0·8182
2. Flash point (Abel test)	23·2° C.	25° C.	24·5° C.	23·5° C.	50·25° C.
3. Distillation—					
(*a*) Light oils passing up to 150° C.	17·0 p. c.	11·6 p. c.	16·5 p. c.	22·8 p. c.	10·2 p. c.
(*b*) Burning oil proper, passing from 150 to 300° C.	62·8 p. c.	65·0 p. c.	63·5 p. c.	53·0 p. c.	87·8 p. c.
(*c*) Heavy oil and residue, passing above 300° C.	20·2 p. c.	23·4 p. c	20·0 p. c.	24·2 p. c.	2·0 p. c.
	100 per cent.	100 per cent.	100 per cent.	100 per cent.	100 per cent.
4 Paraffin contents—					
(*a*) Of the oil	—10° C. thick	—9° C. thick	—10° C. thick	—9° C. thick	at —20° C. still fluid.
(*b*) Of the residue	+ 7° C. solid	+7° C. solid	+ 7° C. solid	+7° C. solid	12·7 normal candles at 39 grams per hour.
5. Determination of illuminating power on same burner, 2 hour test	8·26 normal candles consuming 36·5 grams per hour.	10 normal candles at 34·9 grams per hour.	8·66 normal candles at 32 grams per hour.	3·1 normal candles at 26 grams per hr. Strength declined after 15 mins. from 5·1 normal candles to 1·95.	
6. Oil consumption per normal candle and hour	4·41 grams	3·90	3·69	8·39	3·06
7. Height of flame	0·20 inch	0·26	0·20	from 0·12 shrinking to 0·08.	0·28
8. Wick consumed	0·024 inch	—	0·016	0·028	0·008

"It is well known that Russian petroleum is heavier and higher in hydrocarbons than American oil, and requires, therefore, more air for its perfect combustion. Furthermore, Russian oil develops in burning a higher temperature than American oil, owing to its higher contents of carbon, and its evaporation above the edge of the wick is more energetic. The wick, therefore, dare not reach as high above the edge of the burner as is permissible with American oil, for the reason that no more oil may evaporate from the surface of the wick than can be perfectly burned by the air supplied. By turning up the wick too high, or about as high as is usually done when burning American oil, the flame produced by Russian oil will smoke and soot, owing to imperfect combustion. The flame from Russian petroleum also develops much more intensely than that from the American article, by reason of the larger air supply, hence care has to be exercised in keeping the flame small at the beginning, and strengthening it gradually, until the proper height is reached. There is, however, another point that has *to be watched in* handling Russian oil. When, in filling a lamp, oil is both, namely, the particles of carbon which become incandescent and make the flame appear red, yellow, or white, according to the temperature of combustion. Now, as Russian oil contains more carbon than the American, it follows that in the same volume of flame the Russian oil yields up more incandescent carbon particles, and therefore, is capable of producing a brighter and whiter flame if properly developed. Russian oil showing by photometrical measurement a higher illuminating power than American oil, will throw a white light on a white milk-glass shade, while the American oil, burning alongside of it, will make the shade appear a reddish white."

At the instance of Dr. Albrecht, tests of commercial samples, obtained at retail, of American petroleum, and well refined Russian oil of the "White Star" brand, were made by Drs. William Thoerner, of Osnabrueck, and J. Skalweit, of Hanover. These tests embraced a period of five years, from 1887 to 1892. The White Star oil was also analyzed by the Baden chemical and technical testing station. The results are compiled in table I.

In 1893 a comparative test of American "Standard White" and Russian "White Star" was made in the laboratory of Dr. Albrecht's factory, the results of which are shown in table II.

Finally, there were examined in the winter of 1894 to 1895 three more samples of American oil, in order to determine the resinous and paraffin contents, and the distillates passing between 150 and 300 degrees centigrade.

From the examinations made, Dr. Albrecht draws the following conclusions:

1. The flash point of the Russian oil is from 5 to 7 degrees C. higher than that of the American oil. The former, therefore, is safer as far as danger from fire or explosion is concerned.

2. The Russian petroleum contains much more pure illuminating oil (passing between 150 degrees and 300 degrees C.), and far less heavy oil than American "Standard White."

3. The Russian petroleum is perfectly free from paraffin, hence, remains, like the residue from its distillation, fluid at even 20 degrees C., while American "Standard White" becomes dimmed and thick at from 9 to 12 degrees by the paraffin solidifying, and solid at 17·5 degrees It also contains from 20 to 26 per cent. of heavy, paraffinous oil, which at 6 to 8 degrees C. is still solid.

4. The illuminating power of the Russian oil is not inferior to that of the average American "Standard White." The lighter grade of the Russian "White Star" develops a materially higher illuminating power than most of the American oil samples examined.

5. The oil consumption for the same illuminating effect is 14 per cent. less with Russian oil than with American.

6. Notwithstanding the greater height of the flame (0·28 inch from the Russian oil as against 0·12 to 0 26 inch from the American) from two to three times as much wick is consumed by the American oil as by the Russian.

The latter fact shows the necessity above mentioned to keep the wick turned lower when using Russian oil than when burning American oil. From the analysis of American oil procured from Harburg (Table II.), it will be seen how injuriously the low contents of pure light-giving oil in this article (but 53 per cent.) influence its illuminating power. The latter declined after 15 minutes burning from 5·1 normal candle to 1·95, the height of the flame from 0·12 inch to 0·08 inch. The consumption of oil amounted to 8 39 grams per normal candle an hour. The Russian oil, on the other hand, containing 87 8 per cent. of light-giving components, developed an illuminating power of 12·7 normal candles at 0·28 inch height of flame, and an oil consumption of only 3·06 grams per candle an hour. This shows that the more components pass between 150 and 300 degrees C., the better the oil. Just as important is the greatest possible elimination of paraffin components which do not pass below 300 degrees and become easily solid in the cold, and which are contained in American "Stardard White" in so high a percentage. This circumstance may have dangerous results in the winter when such oil is used in signal lights on railroads, drawbridges, etc.

Concluding, Dr. Albrecht advises the Russian refiners to manufacture for export to Germany a specially well refined illuminating oil of no higher than 0·820 specific gravity at 15 degrees C., because such oil would be better able to compete with the American oil than the present article of 0·825 spec. gravity. The Russian oil was fully the equal of the American product, as has been shown by its successful introduction in the markets of Austria-Hungary, Great Britain, and eastern countries. Only Germany offered an obstinate resistance to its introduction, but this resistance was not based on the quality of the oil, but on economical conditions which in Germany had hitherto been very unfavourable for the adoption of Russian oil.

NEW BRIDGE AT NORTHWICH.—The town bridge at Northwich was successfully removed this week, and the River Weaver was re-opened for traffic again. The bridge, which is being replaced by an electrical swing structure, will be rebuilt over the River Dane, thus providing an alternative route should the London-road again subside. The removal of the bridge was a most difficult operation, two great iron girders, each a hundred feet long, being shifted intact to special barges. When the improvements are completed, the Weaver will rank among the finest navigable streams in the kingdom.

ACTIVITY IN OIL SHARES.—During the week oil shares have been to the front. Schibaieff shares, which, after opening at 36s.-37s., were offered on a few holders being anxions to snatch their profits, and fell heavily, to 32s. At the close the price was 33s., and the market had a more settled appearance. Russians were steady at 2½. Bakus were picked up, and closed steady at $1\frac{1}{2}$-$1\frac{9}{16}$. A market opened in the shares of the Weygang Oil Products Company, which rose from $1\frac{5}{16}$ to $2\frac{1}{4}$-2½, being about $1\frac{3}{16}$ up on the day. The company is not strictly an oil concern, but works a chemical process which deals with crude petroleum. It is stated that several business men of Bucharest are about to undertake a journey to London and Paris in order to conclude negotiations with a syndicate for the promotion of a limited company for the working of petroleum wells in Roumania.

Legal Intelligence.

CHANCERY OF LANCASHIRE.

(Before Vice-Chancellor Hall, at the Manchester Assize Courts.)

RIVER POLLUTION BY THE LANCASTER CORPOR T ON

ORMROD *v.* THE CORPORATION OF LANCASTER.

The Vice-Chancellor has delivered his reserved judgment (*C.T.J.* 601) upon the motion by the defendants in this case, asking the Court to reduce the sum of £2,595. awarded by the Registrar to the plaintiff, Captain Ormrod, of Wyresdale, near Lancaster, as compensation for damage caused by the defendants' pollution of the River Wyre, which flows for some six miles through the plaintiff's property. Mr. Cripps, Q.C, and Mr. Attkins were counsel for the defendants in support of the motion, and Mr. Maberly and Mr. Grant for the plaintiff in opposition thereto.—In giving judgment, his Honour said that during the period from November, 1895, to February, 1896, the defendants, who had allowed their Abbeystead Reservoir to silt up by not taking sufficient care to clean it out, caused large quantities of mud, which had accumulated in the reservoir, to be thrown into the river, and it was carried down and large deposits were formed in the bed of the river, whereby its flow was obstructed and the adjoining lands were flooded, and the plaintiff's reservoir was choked up by the mud and serious injury was done to the fish. In that state of things the plaintiff brought his action for an injunction and damages, and when the matter came before him it was by consent referred to the Registrar to find what compensation was due to the plaintiff. The Registrar had certified that the plaintiff was entitled to £2,595., but the defendants said that was excessive, and now sought to have the amount reduced. The plaintiff, on the other hand, supported the finding of the Registrar, although he noticed that he originally estimated his damages at £5,000. The Registrar had explained that he had arrived at the sum of £2,595. in the following way. He had awarded £985. in respect of damages to the plaintiff's mill reservoir, £100. loss of profit on the mill, £1,400. for damages to the fish, £105. as a solatium to the plaintiff for his personal loss of pleasure in fishing, and £5., an agreed sum to be paid in respect of an inspection. It was to be observed that the plaintiff was only the tenant for life of this property, and the Registrar, in certifying the damage to be £2,595., was certifying to the injury to the inheritance, which would include not only the plaintiff but the remainder man. He understood, however, that it had been arranged that the trustees of the settlement should be added as plaintiffs, so as to represent the whole estate. If that had not been done already it must be done, and he would proceed on the assumption that all the parties were on the record. It was pretty evident, from the way in which the plaintiff based his claim, that the basis was the amount necessary to reinstate the premises in their previous condition. But it was admitted in the course of the arguments before the Registrar that that was not the proper rule. The true measure of damages was not what it would cost to reinstate the plaintiff's property, but the depreciation of value in his property in consequence of the wrongful acts of the defendants, with this in addition, that the law said that when one person trespassed upon the land of another and used that land he must not only pay for the injury done but pay for the user of the land also, and in this case it was said that the defendants had had the use of the plaintiff's land as a tipping ground. Of the several amounts awarded by the Registrar, the sums of £5. for the inspection and £105. as compensation for loss of the pleasure of fishing were not disputed by the defendants. As to the sum of £985. awarded in respect of the mill, the defendants said the fee simple value of the mill was not more than £1,000. There was no doubt that it was an old mill, and than the value of such places was going down. But it was beyond dispute that from 1888 to 1896 the mill let at a rental of £110. a year, and it would be putting a moderate estimate upon its value to place it at £1,600. The evidence showed that the results of the defendants' acts had been to destroy about 75 per cent. of the power of the mill, and 75 per cent of £1,600. was £1,200. He thought, therefore, that the Registrar was well within the limits in fixing the compensation for injury to the mill at £985. The next item was the award of £100. for loss of profit on the mill. He was not quite sure about that, but although he should not himself have allowed anything under this separate head, he should not interfere with the award in that respect, seeing that the sum of £985. was so much within the mark. As to the sum of £1,400. for damage to the fishery, it seemed that the plaintiff bred fish and took very considerable interest in the fishery. It was obvious that if the river was left to itself it would restock itself with fish from the tributaries and those coming up from the sea. The question was how long that would take. Some of the witnesses said eight or nine years, others nine to twelve years. As to the value of the fishery, the plaintiff said he would not take £100. a year for it, but he did not think that should be taken as its value, because one could quite understand that a country gentleman would not for anything have anglers tramping through his estate and fishing along the banks of his river

The way the Registrar had arrived at the sum of £1,400. was this:—He took £100. a year as the rent of the fishery, and he took the longest period, twelve years, as the time the river would take to restock itself, and then thinking that £1,200. was not enough, he put on another £200. It seemed to him that that was a wrong way of arriving at the injury. He thought £70. a year would be a liberal rental and that ten years would be a liberal time to allow for the river restocking itself. That would be £700., but as the river would gradually right itself the loss would be a diminishing one during the ten years, and he thought only half that sum, namely £350., would be enough to allow for the damage done to the river. But he must make allowance for this, that there would also be some permanent injury to the fishery, and he should allow another £150. in respect of this. That made his figures £1,085. for damage to the mill and loss of profit, and £500. for damages to the fishery, and the undisputed sums of £105. and £5. brought the total to £1,695. There should, however, be a further sum for the use of the plaintiff's property by the defendants as a tipping ground for the mud from their reservoir, and he should make the total sum £1,800. as compensation for the whole damage. The award of the Registrar would, therefore, be reduced from £2,595. to £1,800. The costs would be dealt with on further consideration, together with the costs of the inquiry. Leave to appeal was granted to both parties.

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE second meeting of the session was held on November 30, at the Midland Hotel, Derby, when there was a good average attendance. Amongst the members present from Nottingham were Dr. Stanley Kipping, F.R.S., Dr. Sudborough, and Messrs. Caven, Pentecost, Trotman and Ward. There were also Messrs. Adams, Carulla, Herriot and White amongst the members from Derby. At 7 o'clock the Chairman, Mr. Jas. O'Sullivan, called on Mr. L. Archbutt, F.I.C., to read his paper entitled "Notes on the Arachidic and Liguoceric Acids of Earthnut Oil and their Estimation (see *C.T.J.*, Nov. 5, 1898). Details were given of Renard's process with the modifications and precautions used by the author to ensure accurate results and more rapid working. These were compared by variously using 1, 2, 4 grammes of lead acetate with 10 grammes of the oil containing 5% of mixed arachidic and liguoceric acids. The average results did not greatly vary, but the author was led to conclude that by using Tortelli's process, in which an excess of lead acetate is employed, low results are obtained. From an elaborate series of analysis Messrs. Tortelli and Ruggeri had prepared a table of corrections giving the factors to be added to the weight of fatty acids obtained by Renard's process, in accordance with the weight actually got and the temperature of the alcohol used for crystallisation and washing. Mr. Archbutt gave the results of experiments confirming the general correctness of this table, and showing that the correction originally given by Renard is too low. From the mean molecular weight of the mixed arachidic and liguoceric acids obtained from earthnut oil by Renard's process, it was concluded that about 75% consisted of liguoceric acid and about 25% of arachidic acid.

An interesting discussion followed, in which the Chairman, Dr. Kipping, Dr. Sudborough, and Messrs. Caven, White, Ward, Trotman, and Pentecost took part. In the course of his replies Mr. Archbutt stated that he could not explain why the solubility co-efficient should vary with the weight of acids except on the ground that the substance was a mixture of two acids of different solubilities existing in different proportions, and that the solubility seemed to depend upon the mass of alcohol relative to the total mass of acids.

In one of his experiments for the removal of the arachidic acid the mixed acids had been re-crystallised 18 times. Although nitric acid seemed at first sight applicable and more suitable than hydrochloric acid for the decomposition of the lead salt required to be effected in this process, it might be an objection that nitric acid could not be so easily washed out of the ether employed. The author mentioned that he was unable to obtain the melting point of the mixed acids so high as that given by Tortelli. Dr. Sudborough suggested that some difference in the diameter of the capillary tubes employed might account for this, but Mr. Archbutt stated that Beusemann's method had been used. Mr. Archbutt, continuing, said that he agreed with the Italians in the crystallisation temperature, which proved to him that the discrepancy mentioned could not be due to any variation in the thermometers. Replying to Dr. Kipping it was explained that the solubility figures had been obtained by analysing mixtures of olive oil and earthnut oil. He quite agreed that it would not do to go on re-crystallising indefinitely because composition of the mixed acids would be altered. It had to be admitted that the problem was not a simple one. In reply to Mr. Caven's question whether there was enough in the small quantity obtained in some of the experiments to give a saturated solution, he would say that the quantities given were those that crystallised out, and therefore the mother liquor must be saturated.

Mr. Trotman had asked whether all the figures had been obtained by experimenting on the same sample of oil. This was so. In reply to other questions the author stated that earthnut oil, which is obtained from the pea nut, ground nut, or the "monkey" nut, is used for cooking and for adulterating olive oil. The best qualities are very much like olive oil, and not easily distinguished from it except by the tests described and by its having a rather higher iodine value than olive oil. The constant, including the specific gravity, of earthnut oil and olive oil are very nearly the same. There are, he believes, several kinds of earthnut oil. It is, however, remarkable that the percentage of the sparing soluble fatty acids present is very constant. So far as is known these acids (arachidic and liguoceric) only occur in earthnut oil, in rape oil, and in oil of mustard. They are easily saponifiable.

The Chairman proposed a vote of thanks to Mr. Archbutt for his valuable paper, which was heartily carried, and the proceedings terminated.

MANCHESTER SECTION.

The second meeting of the session was held on Friday, December 2nd, at the rooms of the Chemical Club, Victoria Hotel, Manchester, Dr. Watson being in the chair. In the half hour devoted to such matters, Dr. Lewkowitsch brought forward a note on the reactions which take place during the saponification of fats with caustic alkalies, and showed by a series of curves, plotted from experimental values, that it was quite probable that the reaction took place in stages, which in their progress would lead to the formation of di-and mono-glycerides. He suggested methods of ascertaining whether these products were present, one of which was the determination of the acetyl value of samples drawn at different stages of the saponification process. If these products were not present the value would be constant throughout, but he had obtained curves from the various acetyl values determined on a series of samples taken progressively. There was a brief discussion in which Dr. Marchlewski, Messrs. Allen and Bowman shared, the first of these suggesting that an effort should be made to isolate the intermediate glycerides using benzol sulpho chloride.

Dr. Grossmann then read a paper on "Hydrosulphite of soda, and its use in indigo dyeing," which was chiefly devoted to a comparison of the arguments adduced by Schutzenberger and Bernsten in support of their respective formulæ $Na_2S_4O_4$ and $NaHSO_2$. After reviewing the equations expressing the various reactions, he summed up in favour of Schutzenberger. As regards the use of this salt in indigo dyeing he contended that there were really no hydrosulphite vats in use in this country, though there were dyers who flattered themselves that they prepared and used them. Another fallacy was that in using soda in the preparation of the vat they had a soda vat, and with lime a lime vat. There was no such thing as a hydrosulphite of lime vat. The genuine hydrosulphite vat had not had a fair trial in this country, and on this account he had endeavoured to throw some light on its true action, and the chemical composition of its principal constituent. There was no discussion. Mr. Geo. H. Hurst then read some notes on "Paint Driers," in which he pointed out that though manganese and lead salts had been in use for several years it was still doubtful as to which was the better drier. He then went on to relate some experiments he had made with a view to ascertain the influence of the temperature in boiling upon the drying properties, which in effect indicated that up to 500°F. the drying power was increased, but beyond that the higher temperature resulted in no improvement. It was desirable that metals in order to be good driers should be capable of forming more than one oxide, and those unstable compounds. There was a discussion in which Messrs. Bell, Kleemann, Terry, Lewkowitsch and others took part. Dr. Lewkowitsch pronounced in favour of lead as a drier, and showed some samples of other driers he had prepared. Dr. Kleemann referred to the liability of linoleates to spontaneous combustion when precipitated from hot solutions. Mr. Bell announced an invitation from the Liverpool Section to their dinner and smoking concert on Wednesday, 14th (tickets 5s.) Members desirous of going will leave by the 5-30 p.m. train, and sleeping accommodation is to be provided at the Adelphi Hotel.

CAPE COPPER CO., LTD.—A dividend of 7s. per share has been declared, making, with the interim dividend of 3s. per share paid July 1, 10s. per share for the year on the cumulative preference and ordinary shares, free of income-tax, payable January 2. The transfer books closed on December 3.

THE SCHIBAIEFF PETROLEUM CO., LTD.—An interim dividend on the preference shares at the rate of 6 per cent. per annum for the period ending 12th October, 1898, and an interim dividend of 1s. per share on the ordinary shares, both less income tax, have been declared. The directors state that the profits reported by the Russian Company to have been made during the first six months of its current financial year are much in excess of the amount required for the present distribution, but it has not been deemed prudent to divide a larger sum as interim dividend.

Our Book Shelf.

RCHES ON LEADLESS GLAZES. By W. J. Furnival. 135 pp. one (Staffs.) : W. J. Furnival, 1898. (£5 5s.).

work aims at summarising the practical results which have been at by a study of the preparation and use of leadless glazes. ıbject is of great interest just now, both on the grounds of ity and commercial economy, and this book devotes the first and ıpters to the consideration of the subject from the former and spects. The five intervening chapters are devoted to a study of nposition of glaze ingredients ; old leadless glazes ; research ıents ; practical recipes ; and notes on crazing antidotes. There t of valuable and helpful information for potters in the two s on research and recipes, the nature of which explains the hat inflated price asked for the book. The difficulty of the whole and the secrecy under which all information on leadless glazes lly buried must be taken into account. Coming to the construc- the book itself, as opposed to the subject-matter, there is room ch improvement. Typographical eccentricities are not wanting. rangement is bad, particularly in the fourth chapter, and though ss references are plentiful the task of following them is tedious xtreme. In some cases we have yet to find some of the recipes l to. This is unfortunate, but it does not seriously diminish the al utility of the book, and in view of possible, not to say prob- gislative developments, we should recommend all potters to study ents.

IGHT " YEAR BOOK, 1899. Compiled for the Proprietors of Sunlight " Soap Company. Illustrated. 477 pp. Port Sun- ht : Lever Bros., Ltd. 1898. (3d.)

book is nicely got up in red cloth boards. In addition to the atures it contains a number of interesting articles, one of which tled "The Laundries of the World," by the late George us Sala. Sir Walter Besant also contributes a complete story. her articles deal with such varied subjects as "The Story of eam Engine," by F. M. Holmes ; "Profitable Rearing of ," "Dogs, Cats, and Cage Birds," "Horticulture," "Hints Toilet," "Household Remedies," "Cookery and Household s," "The Cathedrals of England and Wales," "Sports and es," the British Colonies, Geography, Literature, Science, Fine Commerce, Architecture, Agriculture, Army and Navy, etc. The ontains an admirable series of road maps of the British Isles, in two colours. Finally, there is a series of interesting Com- ıs open to all, in connection with which some valuable prizes ıounced, the total amount of which is £400.

RAILWAY DIARY AND OFFICIAL DIRECTORY FOR 1899. ondon : McCorquodale & Co., Ltd. 1898. (One Shilling.)

diary with one week on a page will be found a handy desk ıion in which to jot down memoranda. There is no novelty in ngement so far as the diary itself is concerned, but the matter at nmencement is of such a character as to be extremely useful to aders in their ordinary business. There will be found, amongst tables for calculating wages and salaries, interest tables, tables present values for purchasing leases, annuities, or estates; ıent table, and, winding up, with a table of ten years' half-yearly ıds in railway stocks.

t of the directors and officials of the railways of the United ım follows the diary proper, and occupies together with the of traffic, accounts and dividends, no less than sixty pages.

same publishers have sent us a copy of their railway almanac, of useful railway information, which sells for sixpence.

ONARY OF PERFUMES USED IN SOAPMAKING. By A. M. ırance. 109 pp. London : Maclaren & Sons. 1898.

work consists of a series of articles which were printed in *The ıker*, which are now reproduced in book form. There is a al appendix. The object is to compile a record of perfumes for of which there is either written or oral authority, though, ly, some of the perfumes referred to have but a very limited tion. In the botanical appendix, however, many of the essen- s named are not commercial products. The book is neatly got a handy form. Soapmakers in general must naturally already y acquainted with the contents, since the articles first appeared special organ.

NGE OF ADDRESS.—Messrs. Uhlmann and Keutgen have secured premises at No. 207, Pentonville-road, N., and their offices, as workshops and warehouse, have been removed there.

Trade Notes.

THE WORSTED DYERS' COMBINATION.—The Bradford Dyers Association, Limited, has been registered with a share capital of £2,000,000. ; but in addition, debenture powers to the extent of £1,500,000. It is expected that the prospectus will be issued some time next week, and in any case not later than Saturday, the 17th inst. The first public issue of capital will consist of £1,000,000. each of 5 per cent. preference and ordinary shares of £1. each, plus £1,000,000. of 4 per cent. debentures—say, £3,000,000. in all, leaving £500,000. of debentures for future issue, as and when required by further absorptions or developments. The balance of the debenture powers will only be exercised against the acquisition of property and assets valued at one-third of any such stock to be issued. The 23 combining firms detailed in the prospectus will take one-third of the forthcoming issue in part payment of the purchase money, and although no promotion money or underwriting commissions are being paid, the success of the rest of the issue is affirmed to be already practically ensured.

NITRATE STATISTICS.—The Permanent Nitrate Committee's Public Statistical Circular for December, 1898, shows total exports to Europe, November, 4,411,000 quintals ; loading for Europe, 1st December, 2,215,000 quintals; imports, Europe, November, 67,470 tons; deliveries, Europe, November, 38,490 tons; visible supply, Europe, 1st December, stocks and afloat, 597,380 tons.

SUGAR FACTORY FOR JAMAICA.—It is stated that Messrs. D. Stewart & Co., Glasgow, one of the largest manufacturers of sugar refining machinery, have sent a representative to Jamaica with £250,000. to establish a central factory capable of dealing with 75,000 tons of canes per annum. The representative told a correspondent that his firm has discovered a new process of handling canes, and are sanguine of placing sugar on the English market even cheaper than beet.

THE CHESHIRE SALT TRADE.—The official returns of white salt shipments for November, show that the trade of the past month has been very unsatisfactory, being a decrease in most of the largest markets. This has not been altogether for lack of orders, but owing also to scarcity of freight. The shipments are the smallest for many years, being 30,000 tons, compared with an average of 39,000 tons for the past decade. Rock salt shipments have been larger. The net decrease from the Upper Mersey ports have been :—Liverpool, 2,156 tons; Runcorn and the Ship Canal, 1,915 tons; and Weston Point, 105 tons.

INDIAN AND WESTERN AUSTRALIA GOLD PRODUCTION.—The November output of gold in Western Australia, compared with the corresponding month of 1897, shows an increase at the rate of over 47 per cent., the figures being 111,793 oz., value £424,813., against 75,840 oz., value £288,200. The New South Wales November output amounted to 33,492 oz , compared with only 13,199 oz. in October. Farmers who have suffered from the drought must look with envious eyes on the figures in miners' returns. The returns of the November output of the principal Indian gold mines are now to hand, a slight increase as compared with the previous month being shown in each case. The Ooregum's 4,580 oz. marks the most improvement, being 19 oz. above the October total, Nundydroog's 3,400 oz., Champion Reef's 12,270 oz , and Mysore's 13,013 oz. being only 6 oz., 5 oz., and 2 oz. higher respectively. The total in each of the first three returns is higher than that in any of the preceding six months.

NON-POISONOUS COMPOUND FOR MATCHES.—In response to the reward offered by the French Government for a substitute for yellow phosphorus in making matches. MM. Sevene and Cohen have submitted their matches. These matches contain phosphorus sesquisulphide and chlorate of potash. The substance is very stable ; it ignites at 95° C. (203° Fahr.), and can be, therefore, lighted by rubbing like ordinary phosphorus. They have become popular during the few months they have been obtainable, and are known as the S. C. matches, after the initials of their inventors. The public may hardly have noticed the change, for in their appearance the new matches resemble the old ; they may have a faint smell, more a sulphide than a phosphorus smell, however. The sesqui-sulphide, at any rate, has such a faint smell, but the employés in the works are said not to complain about it. The new matches do not phosphoresce even when rubbed energetically, but they are poisonous to a very slight degree. If they can really be manufactured, transported, and stored with safety and be relied upon to strike, the inventors have claims upon our gratitude. No accidents have occurred as yet.

The directors of the River Plate Gas have declared an interim dividend of 6s. per share, being at the rate of 6 per cent. per annum, free of income tax, for the half-year ended June 30 last, payable on the 17th inst. The transfer books will be closed from the 10th inst. to the 17th inst., both days inclusive.

Personal.—*Mr. James M'Connell*, who has hitherto acted as farm bailiff at the Carrington Moss Estate of the Manchester Corporation, has just been appointed by the Cleansing Committee Estate Superintendent at Chat Moss. The salary is £200. a year, with a small allowance in connection with the residence.—*Mr. Ronald Bridgett*, who has been British Consul in Buenos Ayres for a number of years, has resigned his position and retires on a well earned pension. Applications for the post are sure to be numerous.

The Manchester Sewage Scheme.—Notice has been given by the Manchester Corporation of their intention to apply for an order to acquire certain lands at Flixton and Carrington for the purpose of an extension of the Manchester Main Drainage Scheme. The proposed application is engaging the attention of the Flixton and Urmston Joint Drainage Committee and the Flixton and Davyhulme Parochial Committee. The impression has been formed that if the intentions of the Corporation are carried out the interests of property owners in the district would be prejudicially affected, and steps have been taken to hold a joint conference on the subject.

How German Trade is Pushed.—The increasing support lent by the Imperial Government to commercial enterprise finds expression in the estimates in the growing demands for the Consular service. Additional secretaries are to be appointed to the Legations at Mexico, Pekin, and Washington. To the Embassy at St. Petersburg experts in agriculture and forestry are to be appointed in view of the importance of the Siberian Railway. New Consulates are to be established at Bahia, Santa Catarina, Caritiba, Hankow, Sao Paolo, and Prague. Three thousand pounds are demanded for the sending of commercial experts to the United States, South America, and Turkey. This is all done without fuss and with the command of very poor means, but these are made enough to serve their purpose. The German export trade forms the centre of gravity of almost every political transaction.

The Bagnall Oil Co., Ltd.—The statutory general meeting of this company was held at the Manchester offices of the company, 4, Cathedral Street, on Thursday. Mr. Walter G. Bagnall (chairman of the company) presided.—The chairman, in his address, said the company was now in possession of the business and properties of the late firm of Bagnall and Co. They were utilising in the most satisfactory manner the advantages secured by that firm for the development of the bulk oil trade. Their installation in the Ship Canal dockyard was fitted with the latest improved appliances for rapidly dealing with traffic. A tank steamer with a full cargo of between 800,000 and 1,000,000 gallons of different kinds of oil could be berthed and fully discharged within 24 hours after her arrival. Though seriously hampered by excessive freights (which had increased during the past few months from 14s. to 30s. per ton), vessels continued to arrive, and 16 ocean tank steamers were now being built in the dockyards of England.—Mr. Malcolm Guthrie expressed his confidence in the future of the company.—The official business of the company was transacted, and a vote of thanks to the chairman and managing directors concluded the proceedings.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are rather firmer at 8½d. to 9d. for 90's and 50/90's. Naphthas are unchanged. Carbolic acids are steadier, and liquid is dearer at 1s. Anthracene dull. Pitch a little easier, but steady at 25s., f.o.b. East Coast.

Sulphate of ammonia steady. The market is quiet, but prices are firm generally, value at all ports (including Beckton) being £9. 18s. 9d. to £10., excepting Liverpool, which is quoting £10. 1s. 3d. Forward, Beckton, £10, Jan.-June delivery.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business continues moderately active, both for present and forward deliveries. There are no important changes in values to record during the past week. For caustic soda spot quotations are :—F.o.b. Liverpool, 77%, £7. 12s. 6d. ; 74%, £7. 7s. 6d. ; 70%, £6. 17s. 6d. : 60%, £6 nett per ton. For forward contracts there is keen competition at lower prices. Ammonia alkali, 58%, unchanged at £3. 17s. 6d., bags, f.o.r. makers' works, for forward delivery. Prices of soda crystals and bicarbonate are unaltered. Salt-cake, in bulk, firm at 26s. per ton, free on rails. Bleaching powder rather quieter, and competing sellers seem indisposed to reduce price below £4. 2s. 6d., f.o.r., for 1899 delivery. Chlorates of potash and *soda are unchanged* at 3½d. to 3⅝d. per lb. Sulphate of copper steady at £18. 10s., f.o.b., for prompt, and £18 15s. January/March shipment. Nitrate of soda is steady in price, and in good demand. Brown acetate of lime is firm at £5. 10s. nett, ex-warehouse. Grey, £8. nett per ton. Acetic acids unaltered. Acetate of soda firm at £12. 5s. per ton. White sugar of lead £25. per ton. For yellow prussiate of potash demand is active at 6⅝d. to 6¾d. per lb. Cyanide, 1s. 1d. per lb. White powdered arsenic is a firm market, stocks being considerably reduced, and prices ruling are £16. 5s. to £16. 10s., Garston, London, etc. Aniline oil and salt are dearer. Glycerine is lower in crude qualities. Borax continues firm at the recent advance. Sulphocyanides quiet. Potash, caustic and carbonate, are in fairly good request, and prices are steady.

REPORT ON MANURE MATERIAL.

There is a firmer tone in the market in all branches, but there is not very much business going on.

For high grade Florida rock quotations for second half of 1889 and 1900 seem to be above the ideas of U. K. buyers, but the Continent and Baltic continue to purchase. The quotations for 58/63% Algerian is 6½d. per unit, in cargoes, c i.f., to good U. K. ports, but for South Carolina 6d. per unit would be accepted, 1899 shipment.

Further sales of East Indian bone meal have been made at £5. per ton, and the market closes very firm thereat.

Nitrate of soda is steady at 7s. 6d. per cwt. for ordinary and 7s. 7½d. per cwt. for ordinary quality.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is slow of sale both on spot and to arrive, but prices remain steady. Olive is in good demand in spite of the firmness of prices, the market closing strong. Linseed is dull, and there is not much doing. Sellers continue to offer Liverpool makes in export casks at 17s. 6d. to 18s. 6d. per cwt. Cottonseed quiet, with a small business passing at 15s. to 15s. 6d. Castor oil is rather steadier, sellers for shipment being firmer, but the spot market is quiet with good seconds Calcutta at 2⅞d., first pressure French 2¾d. to 2⅞d., and Madras 2⅝d. per lb. Tallow keeps much the same. The movement is small but prices are firm. Resin is in fairly good demand with prices steady in all grades. Spirits of turpentine firm and moving satisfactorily at 29/9 per cwt. Petroleum steady with American 6⅝d. to 8d , and Russian refined 6d. per gallon.

CAKES.—There has been only a slow demand for spot parcels of American Western linseed, and the quotation rather favours buyers at £6. 17s. 6d. to £7. 5s., and business has also been concluded in other imported descriptions at a shade under last prices for River Plate and Bombay, but sellers still ask £7. 5s. and £7. 5s. to £7. 7s. 6d. respectively for these grades, both usual terms, whilst Russian offer at £7. 7s. 6d. to £7. 12s. 6d. per ton nett cash. There has been a moderate fair trade done in Liverpool makes, but the quotation is still given at £7. 17s. 6d. to £8. 15s. per ton, according to brand. Good to choice brands of American decorticated cottonseed are firm and the turn dearer, with a continued good business passing at £5. 13s. 9d. to £6., according to quality, with moderate transactions reported in Liverpool makes at £6. 7s. 6d. to £6. 15s. per ton, according to brand. For undecorticated Liverpool makes sellers still experience a very fair demand, and the quotation is well maintained at £4. 2s. 6d. to £4. 15s., according to brand. Egyptians on the spot meet an improved demand at £4. 3s. 9d. per ton ex quay.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet : Scotch warrants closed at 48s. 11d. ; Middlesbrough, — cash ; and hematite, 56s. 10½d. Copper steady : Chili bars, G. O. B.'s and G. M. B.'s, closed at £55. 2s. 6d. to £55. 7s. 6d. cash, and £55. 3s. 9d. to £55. 8s. 9d. three months. Tin easier : Straits closed at £81. 17s. 6d. to £82. 7s. 6d. cash, and £82. 8s. 9d. to £82. 18s. 9d. three months ; Australian, £82. 3s. 9d. ; English ingots, £85. Lead steady : Spanish, £13. 5s. English, £13. 8s. 9d. ; Silesian spelter, ordinary, £24. Nickel, 1s. 2½d. Antimony, £37. Quicksilver : First hands, £7. 15s. ; second hands, £7. 14s. *Copper shares* steady : Cape, 4⅝ to 4¾ ; Copiapo, 2 1/16 to 2 1/16 ; Libiola, 1¾ to 2 ; Mason and Barry, 3 1/16 to 3 1/16 ; Rio Tinto, 29¾ to 29⅞ ; Tharsis, 7 1/16 to 7 3/16.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The position and prices recorded a week ago are relatively the same with the exception of linseed oil, which has become 7s. 6d. per ton cheaper. The following is a return of the stocks of seed in Hull month ending November 30, as against October 31 :—Linseed, 11,208 qrs. against 208 qrs. ; rapeseed, 11,448 qrs. against 3,525 qrs. ; cottonseed, 460 tons against 740 tons ; whilst the imports during the month have been :—Linseed, 131,304 qrs. against 53,510 qrs. Oct. 31 ;

rapeseed, 32,027 qrs. against 17,919 qrs.; cottonseed, 26,829 tons against 20,597 tons. Linseed oil in all positions, 15s. 3d. naked. Refined and Boiled £1. to £1. 10s. per ton extra. Refined cotton oil, spot, naked, 12s. 6d., forward Nov./April, 12s. 7½d.; crude 11s. 3d. spot; 11s. 4½d. Nov./April. Filtered refined about £1. per ton above ordinary; barrels £1. 10s. and ordinary casks £1. per ton extra. Spirits of turpentine (American) firm and unchanged, 29s. 6d. to 30s. per cwt. Castor oil, extracted here, pure pharmaceutical, cold drawn, 29s. 6d. per cwt. in barrels, 3¾d. per lb. in cases; firsts, 27s. in barrels, 3 1/16d. per lb. in cases; seconds, 26s. in barrels, 2 15/16d. in cases. Olive oil from £31. to £33. per tun. Olive oil soap £16. to £18. per ton. Oleines £17. to £19. per ton. Resins firm, quoted 5s. to 9s., according to grade. Cod oil, £16. to £18. per ton. American pail lard, 29s. to 30s. per cwt. Danish and Swedish butters, 121s to 123s. per cwt.; Dutch, 110s. to 118s.; Colonial, 107s. to 114s.

CAKES.—Feeding stuffs find a steady market. Linseed is a steady but quiet market, whilst cottonseed is held for more money. Linseed cakes, 95% pure, £8. 5s. to £8. 7s. 6d. per ton; oil-cakes (linseed), £7. 5s. to £7. 7s 6d. Russians, £7. 10s to £7. 15s. per ton. Cotton cakes, best makes, £4. 5s. to £4 7s. 6d.; seconds, £4. 2s. 6d. to £4 5s.; decorticated, £6. 7s. 6d. to £6. 12s. 6d. Rape cakes, Black Sea, £4. 2s. 6d per ton.

PAINTS.—White and red leads unchanged. Paints from £9. per ton. Mineral dry colours from £3. 10s. per ton. Ready mixed from £24. in lever tins. Black varnish, £5. 10s. per ton. Oak varnish from 5s. per gallon.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The tone in sulphate of ammonia is still good, though perhaps there has been some leakage. The prompt price to-day is still £10. f.o b. Leith—that is to say, that any pressed buyer could not readily get himself supplied at less money. Possibly, however, a buyer with leisure might find a seller at some small fraction below the figure named. It seems to be the case that one line of forward business has been done at £10. 5s. f.o.b. Leith, spring delivery; but there is little chance to-day of any seller getting so much. Sulphate of copper retains its strength and looks as if it were to go still higher. All the products of the Scotch shale distilling industry are active and fairly well priced. The call for burning oils is well on to its strongest, having been stimulated by the early and long continued bad weather. General chemicals unchanged.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 10s. 0d, 70/72° £7. 2s. 6d, 60/62° £6. 2s 6d, and cream 60/62° £6. all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. 0d.; borax, English refined, £14. 5s., and boracic acid, £25. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3 5/16d., less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £18. 5s. 0d to £18. 10s. 0d. less 5% Liverpool; paraffin scale, hard, 1½d. to 1 5/8d. per lb., and soft 1 5/8d. per lb.; paraffin wax, 120° semi-refined, 1 7/8d. to 2 1/8d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 9,500 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals show no variation in position or price the demand being only slow as usual at this time of the year. Sulphur is steady at £4. 15s. per ton. Soda crystals £2. 12s. 6d. per ton, gross weight, locally. Caustic, 76/77% £7. 15s. to £8. and 70% £7. to £7. 5s. per ton.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 5s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—There is still a fairly good demand for best steam and gas coals, though for other qualities the market is quiet. Coke is steady, and for home consumption the demand continues good. Best Northumbrian steam, 9s. 3d. to 9s. 6d. per ton; second qualities, 8s. 3d. to 8s 6d. per ton; small steam, 5s. to 5s. 3d. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. 3d. to 8s. 6d. per ton; coke, 17s. 6d. to 20s. per ton.

New Companies.

J. E. Fitton, Ld.—CAPITAL £5,000. in £1. shares. This company has been formed to carry on the business of glue, size, gelatine, grease, manure and starch manufacturers and dealers, chemists, drysalters, etc., and to acquire the business of J. E. Fitton. Registered without articles of association. Registered office, Stubley Mills, Littleborough, near Manchester.

Norrington, Hingston, & Co., Ltd.—CAPITAL £20,000. in £1. shares. This company has been formed to acquire the business carried on as Norrington, Hingston, and Co., at Netham, St. George's, Bristol, and to carry on the business of manure and fertilizer manufacturers, chemical manufacturers, chemists, farmers, cattle dealers, etc. The subscribers to the memorandum of association are:—E. A. Hingston, Netham, St. George's, Bristol, manure manufacturer; W. Proctor, Netham, St George's, Bristol, manure manufacturer; C. J. Rossiter, Temple Gate, Bristol, traveller; C. T. A. Hingston, Temple Gate, Bristol, accountant; F. Norrington, Netham, St. George's, Bristol, manure manufacturer; A. H. Pope, 32, Brigstock-road, Bristol, accountant; O. F. D. Norrington, 5, Downfield-road, Clifton, accountant.

Gartcraig Fire-clay Co., Ltd.—CAPITAL £15,000. in £6. shares. This company has been formed to acquire and carry on the business of firebrick and tile makers and coal owners, carried on by the Gartcraig Fire-clay Co., at Gartcraig Works, Shettleston, Glasgow. The subscribers to the memorandum of association are:—D. Shaw, Redholm, Wemyss Bay, gentleman; J. Latta, 17, Royal Circus, Edinburgh, S.S.C.; C. Rodger, 18, Charles-street, St. Rollox, Glasgow, manufacturer; T. Murdoch, 54, Union-street, Glasgow, stationer; J. Bertram, 97, Union-street, Glasgow, engraver; H. Man, Gartcraig, Glasgow, colliery manager; H. Parker, Gartcraig, Glasgow, enameller.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
Week ending November 26th.

Acetic Acid—

Holland,	50 pks.	A. & M. Zimmermann
,,	100	R. W. Greeff & Co.
Germany,	25	Phillipps & Graves

Acetone—

Holland,	2 dms.	T. H. Lee

Alkali—

France,	120 c.	J. Barber & Co.
Belgium,	200	H. Wallace & Co.
Germany,	202	Kirkpatrick, Barr & Co.
Belgium	3,224	R. Waters

Alum—

Holland,	450 pks.	J. White

Alumina Sulphate—

Holland,	100 bgs.	Little & Johnston

Ammonium Cyanide—

France,	£30	Blagden, Waugh & Co.

Ammonium Oxalate—

Holland,	4 cks.	R. W. Greeff & Co.

Asbestos—

N. Russia.	£20	W. Byford

Barium Chloride—

Holland,	11 cks.	Petri Brs.

Barytes—

Holland,	23 pks.	J. Owen
Belgium,	291	W. Harrison & Co.
,,	85	O'Hara & Hoar
,,	252	J. L. Lyon & Co.
Germany,	39	,,
,,	46	W. Harrison & Co.
Holland,	48	O'Hara & Hoar

Bleaching Powder—

France,	197 cks.	J. M. Steel & Co.

Bone Meal—

E. Indies	575 t.	A Hunter & Co.

Bones—

Sydney,	7	Hicks, Nash & Co.
Melbourne,	25	Culverwell, Brooks & Co.
Natal,	30	Perkins & Homer

Bromine—

Germany,	20 pks.	A. & M. Zimmermann

Caoutchouc—

Straits,	100 c.	L. & I. D. Jt. Co
,,	130	W. Pope & Co.
,,	55	Elkan & Co.
Thursday Is.,	5	McIlwraith, McEacharn & Co.
France,	286	H Johnson & Sons
B. Guina,	15	Brookes & Green
B. W. I.,	12	Anderson, Weber & Smith
Sydney,	5	Lewis & Peat
Colombia,	131	Prop. Bull. W.I.

B. W. I., 55 Hoare, Wilson & Co.
" 35 S. Figgis & Co.
" 33 D. Baird
N. Russia, 38 Hale & Son
" 35 L. & I. D. Jt. Co.
Germany, 18 Forbes, Forbes, & Co.
B. Guiana, 99 Jackson & Till
B. W. I., 20 Waterhouse & Sons

Castor Oil—
Italy, 10 cs. City Coml. Wf., Ld.
" 10 Hodgkinsons & Co.
" 20 A. & M. Zimmermann
" 20 Davy Hill, Son & Co.
E. Indies, 100 R. G. Hall & Co.
France, 24 Beresford & Co.

Caustic Potash—
France, 8 dms. J. A. Reid
" 32 W. E. Cole

Chemicals (*otherwise undescribed*),
Belgium, £78 John Cockerill Line
" 541 T. H. Lee
Germany, 236 L. & I. D. Jt. Co.
Holland, 5 Phillipps & Graves
France, 7 Prop. Hay's Wf.
Germany, 36 Butler's Wf., Ld.
Germany, 65 Craven & Co.
" 28 Phillipps & Graves
" 40 brls. R. W. Greeff & Co.
Belgium, £20 Leach & Co.
" 63 O. Scholzig
Germany, 710 A. & M. Zimmermann
Belgium, 126 T. Palmer
Sweden, 10 M. D. Co.
France, 12 cks Beresford & Co.
Holland, 4 R. W. Greeff & Co.
" £91 114 cs. T. H. Lee
Germany, 190 Craven & Co.

Cream of Tartar—
Holland, 8 pks. Kirkpatrick, Barr & Co.
France, 50 W. C. Bacon & Co.
" 5 F. C. Devon & Co.
" 9 C. Christophersen & Co.
Spain, 3 City Coml. Wf., Ld.
France, 10 B. & F. Wf. Co., Ld.
" 5 M. Ashby, Ld.

Disinfectants—
Germany, £30 J. Norrenberg & Co.
" 03 pks. A. & M. Zimmermann

Dried Blood—
France, 25 t. W. E. Cole
" 25 West & Penrose

Dyestuffs—
Aniline
Holland, 4 pks. Brooke, Simpson & Co.
Germany, 3 Butler's Wf., Ld.
Argois
Italy, 713 pks. B. Jacob & Sons
Cochineal
Canaries, 42 pks. W. M. Smith & Co.
Divi Divi
E. Indies, 324 pks. Walker, Munsie & Co.
Extracts
Canada, 345 pks. Boutcher, Mortimore & Co.
France, 232 T. H. Lee
" 95 Furness, Withy & Co.
U. States, 132 W. Dixon
France, 150 L. J. Levenstein & Son
" 44 Union L. Co., Ld
Gambier
Straits, 519 pks. Prop. Hay's Wf.
" 5,309 P. & O. Co.
Indigo
E. Indies, 8 chts. L. & I. D. Jt. Co.
" 38 Kaltenbach & Schmitz
" 56 J. W. Cook & Co., Ld.
" 10 A. Young & Co.
Holland 10 cs. Lon. & Til. Ltge. C. & D. Co.
E. Indies, 14 chts. W. J. & H. Thompson
Myrabolams
E. Indies, 674 pks. F. Claydon & Co.
" 1,361 W. Shelcott
" 1,366 H. J. Perlbach & Co.
Shumac
Italy, 3,100 pks. J. Kitchen, Ld.
" 14 T. S. Harris & Co.
" 38 Schloesser Brs.
" 50 Pickford & Co.
Spain, 127 Hale & Son

Tanners' Bark
Natal, 128 t. A. & W. Nesbitt
" 10 Boutcher, Mortimore & Co.
Belgium, 11 Leach & Co.
Natal, 74 Flack, Chandler & Co.
Turmeric
Italy, 26 pks. J. Barber & Co.
Valonia
A. Turkey, 25 t. T. W. Beard
" 35 Adam Brs.
" 11 Pearson & Co.

Farina—
France, 4 pks. E. Flageollet & Co.
Holland, 50 J. Barber & Co.
N. Russia, 2 W. Nicolson & Co.
U. States, 115 Wingate & Johnston
Holland, 50 J. Knill & Co.
Germany, 500 R. Bennett & Co.
" 50 R. G. Hall & Co.
" 50 Laing, Son & Co.

Glucose—
U. States, 1,000 pks. 1,000 cwts. Pearce, Pelly & Co.
" 1,350 6,830 R. G. Hall & Co.
" 550 775 Ohlenschlager Brs.
" 1,000 1,000 Beck & Pollitzer
" 1,000 1,000 Humphrey & Co.
" 50 275 Fowler Ld.
" 248 1,456 W. Grose & Co.
" 1,100 1,100 H. Johnson & Sons
" 49 300 Page, Son & East
" 100 580 L. Norman & Co.
" 50 300 A. B. Curtis & Co.
France, 250 250 W. E. Cole
" 100 50 Trier, Meyer & Co.
Germany 100 100 J. Frank & Ohlmann

Glue—
Germany, £20 H. Lambert
Belgium, 970 J. Barber & Co.
U. States, 50 Ldn. P. Del. Co.
" 60 L. & I. D. Jt. Co.
Austria, 150 M. Dk. Co.
France, 62 Mory & Co.
Italy, 30 P. Magnus
Germany, 50 M. Dk. Co.
" 15 Hermann Keller & Co.
Belgium, 93 T. H. Lee

Glue Stock—
Adelaide, 23 bls. Leach & Co.
Sydney, 5 Goad, Rigg & Co.
Melbourne, 35 Anning & Cobb
Belgium, 13 D. C. Thomas & Sons
Germany, 140 W. Balchin, Ld.
" 11 Hicks, Nash & Co.

Glycerine—
Germany, £50 Butler's Wf., Ld.
" 40 R. W. Greeff & Co.
N. Zealand, 75 H. Hill & Sons
France, 310 "
Holland, 330 J. Barber & Co.

Gypsum—
France, £30 Burnett Brs. & Sons

Infusorial Earth—
Germany, £57 Snowdon, Sons, & Co.

Kainit—
Germany, 50 t. F. W. Berk & Co., Ld.

Lead Acetate—
Holland, £20 R. W. Greeff & Co.

Litharge—
Holland, 8 pks. J. Owen
Germany, 2 H. Lambert

Methyl Alcohol—
France, 20 cks. E. Catlin
" 9 dms. Lister & Biggs
Germany, 12 "
" 10 Tingle, Jacobs, & Co.

Molasses—
U. States, 100 cks. 544 c. R. D. Taylor
" 670 4,020 L. & I. D. Jt. Co.
" 125 660 Ohlenschlager Brs.
" 300 brls. 1,744 J. W. Cook & Co., Ld.
" 200 1,089 R. D. Taylor
" 1,000 6,364 J. R. Francis & Co.

Nickel Salts—
Germany, 6 cks. A. & M. Zimmermann

Ochre—
Holland, 17 pks. Phillipps & Graves
France, 50 J. L. Lyon & Co.
" 160 W. Harrison & Co.

Paraffin Scale—
U. States, 4,038 brls. Anglo-American Oil Co.

Paraffin Wax—
Germany, 7 cs. Butler's Wf., Ld.
U. States, 220 Anglo-American Oil Co.

Phosphates—
Germany, 10 t. Anglo-Contl. Guano Works

Pitch—
France, 129 cks. Poth, Hille, & Co.
B.W.I., 418 pks. L. & I. D. Jt. Co.

Plumbago—
Ceylon, 208 brls. Marshall & French
" 573 J. Thredder, Son, & Co.
" 340 J. Swire & Sons
" 44 Montgomerie & Workmann
E. Indies, 137 bgs. J. Thredder, Son, & Co.
140 cks.
" 23 brls. A. B. Curtis & Co.
Germany, 120 cs. E. & T. Pink
U. States, 25 Lunham & Moore
" 1 hd. "

Potash—
France, 60 dms. Lon. & Til. Ltge. C. & D. Co.

Potassium Bicarbonate—
Holland, 13 cks. A. & M. Zimmermann

Potassium Carbonate—
France, 110 c. J. A. Reid
Germany, 85 Petri Brs.
" 190 H. Lamber[illegible]

Potassium Sulphate—
Germany, 117 pks. Blagden, Waugh, & Co.

Saltpetre—
Germany, 40 cks. J. Hall & Son
" 350 bgs. H. Grey, junr.
E. Indies, 332 Perkins & Homer

Soap—
France, £140 City Coml. Wf.
" 51 Beresford & Co.
" 100 Lon. & Til. Ltge. C. & D. Co.
" 95 W. Balchin
Holland, 18 Phillipps & Graves
U. States, 180 Lunham & Moore
" 200 H. A. Lamb & Co.

Soda Ash—
U. States, 600 c. A. J. Luke & Co.

Sodium Phosphate—
Belgium, 14 cks. Boake, Roberts, & Co.

Starch—
Belgium, 232 pks. T. H. Lee
" 899 F. Claydon & Co.
" 40 T. Ronaldson & Co.
" 118 Leach & Co.
" 80 J. Harrison
" 280 Becker & Wagner
U. States, 150 R. G. Hall & Co.
" 4,400 Union Ltge. Co., Ld.
" 100 C. Tennant, Sons, & Co.
" 600 L. Sutro & Co.
" 100 Valentine, Tod, & Co.
" 200 Seaward Brs., Ld.
" 1,250 J. Forsey
" 3 L. & I. D. Jt. Co.
Holland, 90 Phillipps & Graves
" 424 Little & Johnston
Germany, 177 Phillipps & Graves

Stearine—
Holland, 51 bls. J. Owen
" 14 cks. Robinson, Roberts, & Co.
" 136 H. Hill & Sons
Belgium, 380 "
" 1 Hollinghurst & Co.
" 1 T. H. Lee
" 14 dms. T. Ronaldson & Co.
" 50 bgs. G. Islay
U. States, 43 cs. Lunham & Moore
Halifax, 1 ck. R. Tucker & Co.

Sulphur—
Italy, 5 t. Houghton & Sons
" 37 G. Boor & Co.

Talc—
E. Indies, £220 E. Davis & Co.
" 2,285 W. M. Smith & Sons

Tartar—
Italy, 10 pks. Fellows, Morton, & Co.
" 27 Howards & Sons

Tartaric Acid—
Holland, 5 pks. Kirkpatrick, Barr, & Co.
" 5 B. & F. Wf. Co., Ld.

Ultramarine—
Holland, 16 pks. J. Barber & Co.
" 7 Haeffner, Hilpert, & Co.
" 20 Thames S. T. & L. Co., Ld.
Germany, 20 Steinhoff, Sons, & Co.

Varnish—
Germany, 9 pks Butler's Wf., Ld.
France, 1 Pinchin, Johnson & Co.
U. States, 33 J. R. Francis & Co.

White Lead—
Germany, 49 pks. Wilkinson, Heywood, & Co.
" 26 N. J. Fenner & Co.
" 20 A. Zumbeck & Co.
Holland, 61 T. & W. Farmiloe, Ld.
" 20 A. & M. Zimmermann
" 43 Taylor Brs.
" 62 F. G. Clifford
Belgium, 65 T. & W. Farmiloe, Ld.
" 15 J. L. Lyon & Co.
" 20 G. E. Banes
France, 16 J. Watt & Son

Wolfram Ore—
Australia, 3 t. H. Bath & Son

Wood Pulp—
Sweden, 400 pks. Alsing & Co., Ld.
" 250 Tough & Henderson
" 250 Raby & Mather
" 564 W. G. Taylor & Co.,
" 84 Thames S. T. & L. Co., Ld.
" 112 Fielder, Hickman, & Co.
Norway, 10 W. D. Cook
" 250 W. E. Bott & Co.
" 3,591 London Paper Mills Co.
Belgium, 2,943 P. Heydemann
N. Russia, 46 M. Dk. Co.

Zinc Chloride—
Holland, £37 H. Lorenz

Zinc Oxide—
Germany, 25 pks. R. W. Greeff & Co.
Holland, 50 J. Matton
" 160 M. Ashby, Ld.

LIVERPOOL.

Week ending November 24th.

Acetic Acid—
Ghent, 100 carbys.

Aluminium—
New York, 500 bxs. T. Ashbury

Aniline Salt—
Rotterdam, 16 cks.

Asbestos—
St. John's, Nfld, 47 pks. Job Bros. & Co.

Barytes—
Antwerp, 146 cks. 57 bgs.

Boracic Acid—
Leghorn, 25 cks.

Castor Oil—
Calcutta, 512 cs. Ralli Bro.
" 1,075

Chemicals (*otherwise undescribed*)
Rotterdam, 5 cs.

Colours—
Antwerp, 12 cks. 2 cs.
Rotterdam, 51 8
Hamburg, 80 2

Cream of Tartar—
Oporto, 5 cks.
Bordeaux, 69

Dyestuffs—
Annatto
Bordeaux, 5 cks.
Cutch
Singapore, 1,950 bxs.
Marseilles, 200
Extracts
Marseilles, 50 brls.
Italy, 139
Newport News, 50 H. Rooke & Sons
Fustic
Vera Cruz, 1,127 pcs. Rosing Brs.
Tampico, 10,500
Kingston, Ja., 3,401
Gambier
Singapore, 5,224 bls.

Orchella
Lisbon, 69 bls. A. Barbosa & Co.
" 225
Shumac
Palermo, 1,750 bgs. 29 bls.
" 300 J. B. Munro
Gelatine—
Rouen, 45 cs. Co-op. W'sale Society, Ld
Glucose—
New York, 20 pails. Whitford & Co.
Boston, 50 brls.
N'port News, 830
Glue—
Boston, 38 crts. T. Robinson & Son
Antwerp, 2 bls. J. T. Fletcher & Co.
Rouen, 67 cks. 20 cs. Co-op. W'sale Society, Ld.
Rotterdam, 200 bgs. 5 cs.
Hamburg, 13 bls.
Manure—
Amsterdam, 700 bgs.
Mica—
New York, 14 brls. Houses Cement Co.
Newport News, 18 brls. Job Brs. & Co.
Mineral White—
Rotterdam, 119 cs.
Ochre—
Hamburg, 3 cks.
Marseilles, 88 brls.
Paint—
New York, 2 cks. J. Mathews & Co.
Paraffin Scale—
New York, 763 brls. Thompson & Bedford
Baltimore, 300
Phosphates—
Antwerp, 400 t. J. T. Fletcher & Co.
" 3 cks.
Phosphorus—
Montreal, 85 cs.
Plumbago—
Genoa, 310 bgs.
Potash—
Dunkirk, 20 dms. Bancroft & Co.
" 26 pks.
Rouen, 53 cks. Co-op. W'sale Society, Ld.
Pumice Stone—
Messina, 80 bgs.
Pyrites—
Huelva, 1,604 t. Matheson & Co.
Rosin Oil—
Rotterdam, 25 brls.
Salicylic Acid—
Hamburg, 10 cs.
Saltpetre—
Hamburg, 44 cks. 185 kgs.
Karachi, 457 bgs.
Soap—
Amsterdam, 1 cs.
Havre, 1 G. H. Fletcher & Co.
Marseilles, 10 cs.
Antwerp, 1
Soapstone—
Bordeaux, 250 bgs. Geo. G. Blackwell, Sons & Co.
Starch—
Antwerp, 110 cs. J. T. Fletcher & Co.
" 91
Hamburg, 180
Stearine—
Antwerp, 147 bgs.
" 13 J. T. Fletcher & Co.
Rouen, 119 Co.-op. W'sale Society, Ld.
Tallow—
New York, 65 tcs.
Boston, 681
" 200 brls. T. M. Mare & Co.
B. Ayres, 1,793 cks.
Varnish—
New York, 52 cs. W. A. Warren
" 20
Waste Salt—
Hamburg, 320 t. 2,039 bgs.
White Lead—
Rotterdam, 65 cks.
Zinc Oxide—
Antwerp, 12 brls.

MANCHESTER.

Week ending November 26th.

Alizarine—
Rotterdam, 84 cks. 28 brls.
Aniline Salts—
Rotterdam, 34 cks.
Asbestos—
Genoa, 28 bls. 3 cs. 4 pks.
Beta Naphthol—
Rotterdam, 1 brl.
Castor Oil—
Marseilles, 30 cks.
Chalk—
Rouen, 2 cs.
Chemicals *(otherwise undescribed)*
Antwerp, 10 brls. J. T. Fletcher & Co.
Rotterdam, 1 cs.
Chromium Acetate—
Rotterdam, 1 brl.
Colours—
Antwerp, 3 brls.
Hamburg, 19 cks. 10 cs.
Rotterdam, 83 18; 15 bxs. 95 brls.
Rouen, 4 cks.
Cream of Tartar—
Rotterdam, 4 cks.
Dyestuffs *(otherwise undescribed)*
New York, 25 bxs. 1 kg. 45 brls.
Extracts—
Halifax, 274 cks.
Rouen, 19
Farina—
Rotterdam, 3,450 bgs.
Glue—
Antwerp, 15 bls.
Hamburg, 10 bgs.
Rouen, 18 cks. 60 bgs.
Indigo—
Rotterdam, 11 cbts. 6 cs. 5 brls.
Limestone—
Antwerp, 1 cs.
Lithopone—
Rotterdam, 28 cks.
Ochre—
Hamburg, 3 cks.
Oxalic Acid—
Rotterdam, 50 cks.
Paraffin Scale—
New York, 870 brls.
Plumbago—
Genoa, 22 cks. 20 bgs.
Potash—
Hamburg, 10 cks.
Rotterdam, 35
Potashes—
New York, 2 cks.
Pumice Stone—
Messina, 20 bgs.
Shumac—
Palermo, 225 bgs. 110 brls.
Soap—
Hamburg, 1 cs.
Soap Lyes—
Marseilles, 40 dms.
Rouen, 20
Soapstone—
Genoa, 100 bgs.
Sodium Aluminate—
Hamburg, 10 cks.
Soda Crystals—
Rouen, 5 cks.
Sodium Phosphate—
Antwerp, 16 cks.
Starch—
Hamburg, 50 cks. 304 cs.
Rotterdam, 30
Stearine—
Rotterdam, 26 bls.
Rouen, 6 bgs.
Sulphur—
Hamburg, 2 cks.
Tannic Acid—
Hamburg, 1 ck. 2 cs.
Tin Chloride—
Antwerp, 18 cks.
Ultramarine—
Hamburg, 4 cks.
Wood Pulp—
Drontheim, 8,203 pks. Wertheim & Co.
Halifax, 10,752 bls.
Rotterdam, 50
Zinc Oxalate—
Hamburg, 4 cks.
Zinc Oxide—
Antwerp, 25 cks.
Rotterdam, 40 brls.

HULL.

Week ending November 26th.

Asbestos—
Genoa, 19 pks.
Barytes—
Antwerp, 189 cks. Bailey & Leetham, Ld.
" 139
Bremen, 128
Rotterdam, 42 Hull & Netherlands S. S. Co.
1 pk.
Castor Oil—
Leghorn, 6 cs.
Marseilles, 11 pks.
Chemicals *(otherwise undescribed)*
Antwerp, 95 cks. Wilson, Sons, & Co., Ld.
Boston, 40 brls. "
Dunkirk, 20 cks. "
Hamburg, 5 crbys. "
Rouen, 4 cks. "
Stettin, 30 "
Chromium Flouride—
Rotterdam, 10 cs. Hull & Netherlands S. S. Co.
Colours—
Bremen, 4 cs. J. Pyefinch & Co.
Rotterdam, 107 pks. Hull & Netherlands S. S. Co.
1 brl.
Stettin, 10 cks. Wilson, Sons, & Co., Ld.
Cream of Tartar—
Bordeaux, 10 cks.
Creosote Salts—
Rotterdam, 24 cks. Hull & Netherlands S. S. Co.
Dyestuffs—
Alizarine
Rotterdam, 60 pks. Hull & Netherlands S. S. Co.
Indigo
Rotterdam, 10 pks. Hull & Netherlands S. S. Co.
Dyestuffs *(otherwise undes.)—*
Hamburg, 35 bgs. Wilson, Sons, & Co., Ld.
Farina—
Amsterdam, 100 bgs. Hull & Netherlands S. S. Co.
Antwerp, 200 Wilson, Sons, & Co., Ld.
Harlingen, 250 bls. Hull & Netherlands S. S. Co.
Gelatine—
Rouen, 20 cs. Wilson, Sons, & Co., Ld.
Glue—
Antwerp, 3 cks Bailey & Leetham, Ld.
Dunkirk, 84 Wilson, Sons, & Co., Ld.
Naples, 7 bgs. "
Rotterdam, 31 Hull & Netherlands S. S. Co.
1 blk.
Glue Stock—
Genoa, 64 bgs. Wilson, Sons, & Co., Ld.
Lithopone—
Amsterdam, 20 cks. Hull & Netherlands S. S. Co.
Mineral White—
Bordeaux, 20 sks.
Naphtha—
St. Petersburg, 10 cks.
Nickel Salts—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co
Ochre—
Bremen, 2 cs. Veltmann & Co.
Marseilles, 65 brls.
Paint—
Genoa, 2 cs. Wilson, Sons, & Co., Ld.
Paraffin Scale—
New York, 184 brls.
Phosphates—
Ghent, 1,000 bgs. Wilson, Sons, & Co., Ld.
Pitch—
Stettin, 50 brls. Wilson, Sons, & Co., Ld.
Pumice Stone—
Leghorn, 53 pks. Wilson, Sons, & Co., Ld.
" 109
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soap—
Naples, 37 cs. Wilson, Sons, & Co., Ld.
Soda—
Amsterdam, 135 bgs. Hull & Netherlands S. S. Co.
Antwerp, 10 Wilson, Sons, & Co., Ld.
Ghent, 200 "
Genoa, 3 brls.
Starch—
Amsterdam, 40 bgs. Hull & Netherlands S. S. Co.
40 cs.
Antwerp, 40 Bailey & Leetham, Ld.
Bremen, 3,718 Veltmann & Co.
Ghent, 215 Wilson, Sons, & Co., Ld.
Stearine—
Antwerp, 34 bgs. Wilson, Sons, & Co., Ld.
Talc—
Genoa, 140 bgs.
Leghorn, 10 Wilson, Sons, & Co., Ld.
Tallow—
Dunkirk, 21 cks. Wilson, Sons, & Co., Ld.
Harlingen, 7 Hull & Netherlands S. S. Co.
Tar—
Konigsberg, 150 brls. Wilson, Sons & Co., Ld.
Tartar—
Naples, 22 cks. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 6 cks. Hull & Netherlands S. S. Co.
Waste Salt—
Hamburg, 600 bgs. Furley & Co.
White Lead—
Amsterdam, 47 cks. Hull & Netherlands S. S. Co.
Dunkirk, 13 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 26 cks. Hull & Netherlands S. S. Co.
Wood Pulp—
Bergen, 14 pks. Wilson, Sons, & Co., Ld.
Christiania, 1,782 bls. "
Drontheim, 240 "
Gothenburg, 649 "
Zinc Ashes—
Stettin, 6 cks. Wilson, Sons, & Co., Ld.
Zinc Oxide—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending December 1st.

Acetic Acid—
Rouen, 10 cks.
Ammonium Chloride—
Hamburg, 1 ck.
Arachide Oil—
Rotterdam, 1 brl. J. Rankine & Son
Asbestos—
Genoa, 115 pks.
Barium Chlorate—
Antwerp 50 bgs.
Barium Sulphate—
Antwerp, 600 bgs.
Barytes—
Rotterdam, 15 cks. J. Rankine & Son
Boracic Acid—
Leghorn, 12 brls.

Castor Oil—
Antwerp, 56 cks.
Leghorn 5 cs.
Marseilles, 1 ck.

Chalk—
New York, 10 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 13 cs.
Christiania, 2 cks.

Colours—
Rotterdam, 18 cks. 1 cs. J. Rankine
201 pks. 13 bxs. 20 brls. & Son
Hamburg, 8 cs.

Cottonseed Oil—
New York, 100 brls.

Dyestuffs—
Alizarine
Rotterdam, 1 bx. J. Rankine & Son

Aniline Colours
Hamburg, 8 cks. 5 cs.
Amsterdam, 2
Extracts
Antwerp, 1 ck.
New York, 25 brls.

Farina—
Hamburg, 250 bgs.
Delsfzyhl, 1,600 J. Rankine & Son

Gelatine—
Hamburg, 5 cs.

Glucose—
New York, 50 brls.
Newport News, 50
Montreal, 50

Glue—
Antwerp, 8 cks.
Rouen, 34 20 bgs. 25 bls.
Rotterdam, 100 bgs. J. Rankine & Son

Logwood—
Hayti 560 t.

Mineral White—
Genoa, 10 bgs.

Molasses—
New York, 750 brls. Waddell & Bryson
" 209

Ochre—
Rotterdam, 10 cks. J. Rankine & Son
Rouen, 59
New York, 27 bgs. 16 brls. 143 kgs.

Oxalic Acid—
Rotterdam, 21 cks. J. Rankine & Son

Paint—
Christiania, 12 cs.

Paraffin Scale—
New York, 45 brls.

Plumbago—
Genoa, 320 bgs.

Potash—
Hamburg, 51 cks.

Pyrites—
Huelva, 2,083 t. Tharsis Sulphur & Copper Co.

Saltpetre—
Hamburg, 87 cks.

Soap—
Leghorn, 20 cs.
Genoa, 68
N'port News, 280 bgs.
New York, 3,000 bxs.

Soda—
Genoa, 52 brls.

Starch—
Rotterdam, 61 cs. J. Rankne & Son
New York, 900 bxs. 350 sks.

Stearine—
Antwerp, 6 bgs.
New York, 100 tcs.

Sulphate of Lime and Rock—
Antwerp, 1,568 bgs.

Talc—
Genoa, 100 bgs.

Tallow—
New York, 40 hhds.

Tin Ashes—
Christiania, 7 bgs.

Varnish—
New York, 3 brls.

Waste Salt—
Hamburg, 928 bgs.

Whiting—
Rouen, 39 cks.

Wood Pulp—
New York, 258 rolls
Christiania, 5,060 bls. 22 cs.

Zinc Oxide—
New York, 130 brls.

TYNE.

Week ending November 26th.

Alum Earth—
Hamburg, 51 cks. Tyne S. S. Co.

Antimony Ore—
Tampico, 3,499 bgs. Cookson & Co.

Barytes—
Rotterdam, 66 cks. Tyne S. S. Co.

Castor Oil—
Antwerp, 28 brls. Tyne S. S. Co.

Limestone—
Antwerp, 7 cs. Tyne S. S. Co.

Paint—
Arendal, 1 cs.
Hamburg, 21 dms. Tyne S. S. Co.

Pyrites—
Huelva, 2,543 t. Tharsis Sulphur & Copper Co.

Salt—
Hamburg, 10 bgs. Tyne S. S. Co.

Soap—
Rotterdam, 3 cs. Tyne S. S. Co.

Starch—
Rotterdam, 96 cs. Tyne S. S. Co.

Varnish—
Antwerp, 2 brls. Tyne S. S. Co.

White Lead—
Rotterdam, 11 cks. Tyne S. S. Co.

Wood Pulp—
Christiania, 770 bls.
Gothenburg, 40

Zinc Oxide—
Rotterdam, 20 cks. Tyne S. S. Co.

GOOLE.

Week ending November 23rd.

Alizarine—
Rotterdam, 177 cks. 12 cs.

Alkali—
Calais, 2 cks.

Alum—
Rotterdam, 6 cks.

Antimony Sulphide—
Boulogne, 5 cks.

Barytes—
Antwerp, 200 bgs.

Caoutchouc—
Boulogne, 11 bgs. 1 blk. 9 cks.

Chemicals *(otherwise undescribed)*
Antwerp, 28 cks.

Colours—
Hamburg, 2 cks. 5 cs.

Dyestuffs *(otherwise undes.)—*
Amsterdam, 5 cks. 1 cs.
Boulogne, 21 1 40 pks
Rotterdam, 166 41

Extracts—
Antwerp, 15 cks.

Farina—
Delfszyhl, 350 bgs.
Hamburg, 850
Rotterdam, 150

Glue—
Antwerp, 10 cks.
Boulogne, 2 bs.
Rotterdam, 90 bgs.

Glycerine—
Hamburg, 4 cks. 8 dms.

Indigo—
Rotterdam, 15 brls.

Ochre—
Calais, 36 cks.

Phosphates—
Calais, 1,530 bgs.

Pitch—
Amsterdam, 5 cks.

Plumbago—
Boulogne, 1 ck.

Potash—
Calais, 4 dms.
Dunkirk, 42 cks. 40
Hamburg, 18

Potassium Sulphate—
Hamburg, 609 bgs.

Saltpetre—
Antwerp, 85 bgs.
Hamburg, 13 cks.
Rotterdam, 200 bgs.

Sodium Sulphate—
Rotterdam, 20 dms.

Starch—
Antwerp, 60 cs.
Ghent, 16 bxs.

Tallow—
Dunkirk, 132 cks.

Varnish—
Hamburg, 1 cs.

Waste Salt—
Hamburg, 500 bgs. 180 t.

GRIMSBY.

Week ending November 26th.

Albumen—
Hamburg, 2 cks.

Caoutchouc—
Hamburg, 1 ck. 7 cs.
Rotterdam, 1

Chemicals *(otherwise undescribe*
Hamburg, 10 cs. 3 pks.
Rotterdam, 1 ck.

Colours—
Hamburg, 2 cks. 3 cs. 200 pks.
Rotterdam, 9 1 kg. 50 bgs.

Glue—
Hamburg, 1 bg.

Plumbago—
Hamburg, 12 cks.

Salt—
Hamburg, 10 cks.

Soap—
Rotterdam, 89 pks.

Waste Salt—
Hamburg, 500 bgs.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 30th.

Acids—
Durban, 10 cs. £19
Jamaica, 10 10

Alkali—
Singapore, 11 c. £6

Ammonia—
Cologne, 16 dms. £83
Durban, 15 cs. 5 pks. 35
Beira, 7 20

Ammonium Carbonate—
Cologne, 7 t. 2 c. £170
Santos, 5 13

Ammonium Chloride—
Santos, 14 c. £24
Yokohama, 9 cks. 101
Durban, 40 56

Ammonium Sulphate—
Bremen, 150 t. £1,471
Hamburg, 100 985
Antwerp, 51 520
Berbice, 25 260
Sourabaya, 300 3,000
Samarang, 100 1,000

Arsenic—
Wanganui, 1 t. £38

Basic Slag—
Cape Town, 335 t. 13 c. £562

Bisulphite of Lime—
Cape Town, 1 t. 12 c. £12
Durban, 1 18 20

Bleaching Powder—
Pt. Elizabeth, 1 t. 14 c. £17

Boracic Acid—
Brisbane, 1 t. £24

Borax—
Fremantle, 2 t. £29
Adelaide, 1 14
Rotterdam, 2 14 c. 90
Sydney, 4 55

Carbonic Acid Gas—
Amsterdam, 20 cyldrs. £60
Rotterdam, 5 flasks 15

Caustic Potash—
Sydney, 1 t. £19

Caustic Soda—
Pt. Elizabeth, 1 t. £8
Cape Town, 11 c. 6
Durban, 13 14
New Plymouth, 7 5
Beira, 5 6
Piræus, 1 7 13
Melbourne, 3 5 68
Batavia, 14 7 88
Delagoa Bay, 2 13 21

Chemicals *(otherwise undescribed)*
Brussels, 1 brl. £19
2 cs.
Amsterdam, 9 kgs. £54
Hamburg, 23 137
Rotterdam, 10 30 cks. 102
Karachi, 7 40
Valparaiso, 500 dms. 47
Dusseldorf, 20 80
Melbourne, 1 1 54 pks. (pt.) 202
Madras, 4 15 kgs. 53
Boulogne, 2 18
Bombay, 13 pks. 27
Cape Town, 66 48
Auckland, 2 10
Cologne, 7 10 cks. 58
Marseilles, 2 5
Malta, 5 17
Oporto, 3 23
Dunedin, 3 12
Demerara, 145 40
Durban, 5 67
Lyttelton, 7 (pt.) 19
Mauritius, 5 16
Wellington, 18 pks. (pt.) 18
Sydney, 12 cs. 13 pks. 100

Citric Acid—
Calcutta, 3 c. £20
Vera Cruz, 2 13
Mombassa, 1 7
Pt. Elizabeth, 3 22
Genoa, 2 t. 228
Brussels, 6 36
Malta, 2 kgs. 13
Amsterdam, 1 8
Seville, 10 60
Santander, 10 39
E. London, 5 35
New York, 1 7
Geraldton, 1 cs. 6
Cape Town, 1 7
Durban, 1 8
Bombay, 3 20

Coal Products—
Alizarine
Boston, 24 cks. £273
Lisbon, 2 pks. 17
New York, 50 332
Aniline
Melbourne, 1 cs. £40
Anthracene
Dusseldorf, 241 cks. £700
Anthracene Oil
Gothenburg, 500 cks. £371
Benzol
Boulogne, 48 cks. £105
Rotterdam, 2 dms. 35
Berlin Blue
Cologne, 5 cks. £48
Carbolic Acid
Stockholm, 15 tins £84
Adelaide, 2 cs. 8
Sydney, 20 dms. 7
Melbourne, 2 cks. 5
Pt. Elizabeth, 6 88
Shanghai, 2 13
Toronto, 20 38
Creosote
Baltimore, 1 cs. £17

York, 525 cks. 378
gne, 14 cks. 1 cs. £169
rp, 707 t. £861
2,627 & qty. 3,242
irk, 695 863
nburg, 60 cks. 35
e, 20 brls. 18
e, 100 brls. £65
n, 150 dms. 22
o, 2 cks. 10
izabeth, 100 kgs. 200 28
ang, 149 93
y, 25 24
Oil
dam 2 cks. £5
Sulphate—
Janeiro, 1 t. 14 c. £32
aux, 100 1,901
ta, 1 18
of Tartar—
ton, 14 c. £75
gton, 1 t. 76
ictants—
de, 6 cs. £16
Town, { 20 374 pks. 100 dms. 272
dam, 1 ck. 35
a, 15 14
zabeth, 2 16
, 4 12
gton, 2 11
rne, 48 pks. (pt.). 20
ine—
ork, 42 t. 10 c. £1,240
thloric Acid—
Janeiro, 4 cs. £10
e—
197 t. 6 c. £917
p, 15 120
ore, 105 1,200
, 102 360
ra, 50 11 450
, 4 43
gton, 3 12 30
nd, 3 12 30
own, 445 5 3,800
5 13 43
fe, 20 140
Acid—
a, 1 t. 5 c. £43
—
dam, 3 cs. £28
sh—
2 t. 2 c. £31
ates—
e, 255 t. £695
orus—
6 cs. £58
e, 2 21
me, 3 26
oric Acid—
7 carbys. £10
—
1 t. 6 c. £27
Salts—
2 t. 5 c. £214
um Cyanide—
on, 10 t. £1,050
abeth, 10 1,006
rk, 380 cs. 1,832
ne, 100 1,155
e, 4 22
20 233
eles, 100 539
, 100 586
100 611
Bay, 10 800
m Prussiate—
rk, 48 cks. £838
m, 8 c. 25
e—
aneiro, 2 t. 14 c. £55
1 10 39
1 17 36
2 1 44
e, 2 42
, 1 8 28
News, 41 5 779
14 3 269
p—
400 cs. £700
250 438
I., 10 cks. 50 dms. 36
till, 100 175
64 t. 15 c. 1,850
, 5 11 125
rn, 302 179
1 5 50 55
beth, 2 3 110

Soda—
Cape Town, 3 t. 16 c. £14
Soda Crystals—
Halifax, 1 t. 16 c £6
Piræus, 1 13 7
Sodium Bicarbonate—
Delagoa Bay. 12 c. £6
Sodium Carbonate—
E. London, 1 t. £27
Sodium Hyposulphite—
Adelaide, 2 t. 4 c. £11
Melbourne, 2 15 14
Sydney, 3 18 19
Brisbane, 2 4 11
Sodium Silicate—
Launceston, 3 t. 2 c. £12
Hobart, 12 10 36
Sodium Sulphate—
Gothenburg, 230 t. £403
Sodium Sulphite—
Melbourne, 1 t. £34
Sulphur—
B. Ayres, 1 t. £15
Falkland Is., 1 8
Sulphuric Acid—
Singapore, 10 cs. £15
Rio de Janeiro, 17 30
Cape Town, 1 t. 10 c. 13
Durban, 15 24
Superphosphates—
Launceston 50 t. £125
Tartaric Acid—
Lyttelton, 2 c £12
Vera Cruz, 4 23
E. London, 3 21
Cape Town, 2 11

LIVERPOOL.

Week ending November 30th.

Acetic Acid—
Copenhagen, 3 t. 16 c. £75
Alkali—
Genoa, 30 t £135
Barcelona, 7 15 c. 2 q. 30
Leghorn, 8 32
Marseilles, 12 1 3
Tripoli (B'rbary) 10 15 2 65
Oporto, 18 5 74
Lisbon, 31 8 3 125
Alum—
Oporto, 5 t. £25
Constantinople, 2 16 c. 13
Beyrout, 1 10 8
Smyrna, 4 8 3 q. 24
Gibraltar, 1 17 1 9
Lisbon, 10 7 3 52
B. Ayres, 7 13 2 35
Ammonium Carbonate—
Marseilles, 2 t. 2 c. 2 q. £58
Copenhagen, 2 16 78
Genoa, 1 2 27
B. Ayres, 18 22
Trieste, 5 cks. 14
Leghorn, 20 kgs. 24
Oporto, 6 8
Ammonium Chloride—
Bombay, 6 t. 15 c. £208
Trieste, 7 11
Copenhagen, 1 30
Smyrna, 1 4 42
Caiffa, 5 8
Stockholm, 16 14
Philadelphia, 2 13 2 q. 88
Alexandria, 3 99
Naples, 4 cks. 44
Palermo, 2 20
Ammonium Sulphate—
Genoa, 20 t. £200
Civieta Vecchia, 10 100
Demerara, 200 2,000
Barcelona, 60 2 c. 592
Alicante, 25 3 251
Valencia, 75 15 708
New York, 50 10 505
Philadelphia, 51 510
Gd Canary, 6 2 60
Malaga, 51 7 500
Teneriffe, 40 14 480
Hamburg, 20 10 195
Baltimore, 100 13 1,008
Las Palmas, 10 100
Biphosphate of Lime—
Callao, 1 t. £6
Bleaching Powder—
Amsterdam, 113 cks. 30 kgs.
Alicante, 30 10
Baltimore, 59
Bombay, 12 cs.
B. Ayres, 20 5 bxs.
Calcutta, 110 cs.
Genoa, 28
Ghent. 76
Leghorn, 30
Milwaukee, 113
Montreal, 41 26 pks
New York, 227
Philadelphia, 226
San Sebastian, 58
Trieste, 56
Venice, 32
Boracic Acid—
New York, 1 t. £29
Montreal, 11 c. 1 q. 14
Borax—
Copenhagen, 5 t. £70
Frontera, 1 c. 2 q. 5
Stettin, 1 8 17
Toronto, 1 19 2 30
Rotterdam, 30 6 1 472
Montreal, 10 7 1 153
Vera Cruz, 7 5
Ancona, 11 8
Sydney, 4 56
Calcium Carbide—
Shanghai, 8 c. £12
Calcium Chloride—
Hamburg, 2 t. 9 c. £6
Sydney, 15 2 32
B. Ayres, 1 16 3
Bari, 20 4 45
Pt. Said, 5 1 11
Melbourne Bay, 10 1 21
Amsterdam, 2 4 8
Brisbane, 5 8 11
Carbolic Acid—
Cape Town, 2 cs. £5
Fiume, 10 cks. 33
Hamburg, { 5 t. 1 1 c. 308
Rotterdam, 15 300
Bombay, 2 2 q. 5
B. Ayres, 11 7
Odessa, 1 14 63
Yokohama, 5 3 4
Caustic Potash—
New York, 2 t. 10 c. £75
Cuidad Bolivar, 16 24
Montreal, 10 15
Caustic Soda—
Adelaide, 35 dms.
Alexandria, 21
Ancona, 35
Antwerp, 126
Bahia, 840
Barcelona, 180 20 cks
Bari, 125
Batavia, 15
Bilbao, 25 pks.
Brussels, 35
B. Ayres, 80
Catania, 53
Corinth, 14
Delagoa Bay, 40
Fiume. 30
Fremantle, 50
Gefle, 14 108 brls.
Genoa, 349
Gothenberg, 10
Halifax, 35
Hamburg, 43
Havana, 60
Hiogo, 295
Leghorn, 33
Ledro, 143
Lisbon, 83
Madeira, 10
Malaga, 80 8 cks.
Manila, 100
Maracaibo, 10
Marseilles, 100
Melbourne, 77
Messina, 80
Monmouth, 50
M. Video, 100
Mauritius, 25
Nagasaki, 100
N. Orleans, 50
New York, 200
Oporto, 238
Palermo, 18
Parnahyba, 30
Paris, 35
Pernambuco, 170
Philadelphia, 50
Porto Alegre, 25
Rio G. do. Sul, 180
Rotterdam. 37
San Sebastian, 50 27
Santander, 10
Shanghai, 4
Sydney, 29
Trieste, 15
Valencia, Ven., 50
Chemicals *(otherwise undescribed)*
Genoa, 12 c. 39. £15
New York, 16 t. 18 508
Hamburg, 2 58
Christiania, 12 2 9
Seville, 25 2 38
Philadelphia, 13 1 354
Stettin, { 1 ck. 5 brls. 134 bgs. 155
Constantinople, 10 cks. 33
Alexandretta, 3 9
Limassol, 1 3
Bremen, 10 29
China Clay—
Bombay, 190 cks.
B. Ayres, 40
Marseilles, 50
Philadelphia, 492
Portland, 100
Ranguage, 140
Trieste, 20
Coal Products—
Aniline Oil
Boston, 8 dms.
Creosote Salts
Antwerp, 1,185 bgs.
Dyes
Barcelona, 20 brls. 4 cs.
Calcutta, 4
Naphthaline
Philadelphia, 975 bgs.
Pitch
Rouen, 2 cks.
Vigo, 50 brls.
Tar
Philadelphia, 50 brls.
Copper Sulphate—
Catania, 9 t. 17 c. £169
Bombay, 5 83
M. Video, 8 18 3 q. 164
Dunedin, 1 18
Melbourne, 15 255
Calcutta, 20 337
Messina, 6 12 2 117
Madras, 1 1 19
Bordeaux, 5 2 87
Tampico, 30 492
Oran, 2 2 38
Trinidad, 4 18 85
Rio G. do Sul, 1 2 20
Ancona, 9 19 1 165
Sydney, 5 85
Dextrine—
Barcelona, 4 t. £58
Disinfectants—
New York, 16 c. 1 q. £30
Rio de Janeiro, 2 2 30
Dyestuffs—
Aniline Colours
Boston, 11 kgs.
Indigo
Calcutta, 1 kg.
Dyestuffs *(otherwise undescribed)*
Bombay, 2 cs.
Glycerine—
Corunna, 6 c. 2 q. £14
Vancouver, B.C., 34 t. 5 1,420
Hamburg, 47 10 2 1,920
Bombay, 4 12
Magnesia—
Oporto, 1 tce.
Philadelphia, 3 crts 10 cs.
Barcelona. 14
Magnesium Sulphate—
Ambrizette, 2 cs.
Lisbon, 75 bgs.
Seville, 25 brls.
Manure—
Gd. Canary, 22 t. £165
Marseilles, 10 1 c. 40
Nitric Acid—
Frontera, 2 c. £6
Paint—
Algiers, 15 pks.
Algoa Bay, 20 dms.
Antwerp, 4 kgs.
B. Ayres, 39 cks. 60
Cadiz, 120 75
Calcutta, 36
Cape Town, 69
Constantinople, 2 50
Demerara, 104 pks.
Fernando Po, 2 53
Gibraltar, 5 dms.
Genaives, 39
Gd. Saline, 18
Halifax, 3 52
Hamburg, 12
Havre, 8
Lahou, 2
Maranham, 74 brls.
New York, 20
Oporto, 15
Panama 100 kgs.
Parnahyba, 25
Pernambuco,

Pt. Said, 30
Rio G. do Sal, 6
Rosario, 10 cs.
St. John's, 78
Singapore, 101
Vera Cruz, 150
Victoria, A., 25

Painters' Colours—
Bahia, 4 cs.
Baltimore, 156 brls.
B. Ayres, 286 pks.
E. St. Louis, 18 cks. 6
Manaos, 5
Maranham, 4 kgs.
Para, 7
Pernambuco, 30 320
Pt. Natal, 4 cs.
Rio de Janeiro, 15 kgs.
Wilmington, 4 25 brls.

Paraffin Wax—
Genoa, 125 bgs.
Larnaca, 14 cs.
Naples, 100
Odessa, 300
Pernambuco, 3
Piræus, 10

Phosphates—
Hamburg, 56 t. 10 c. £240

Phosphorus—
San Francisco, 1 c. £15
Tampico, 8 74
Hiogo, 3 t. 735
Shanghai, 1 8 235
Hong Kong. 6 6

Potassium Bichromate—
Barcelona, 7 t. 4 c. 1 q. £235
Constantinople, 1 30
Oporto, 8 12
Venice, 1 ck. 7

Potassium Chlorate—
New York, 32 t. 15 c. £993
Venice, 10 15
Rotterdam, 1 32
Mexico City, 1 4 38
Hamburg, 5 150
Philadelphia, 15 410
Vera Cruz, 10 15

Potassium Prussiate—
Genoa, 18 cks. £224

Salt—
Abonnema, 109 bgs.
Adelaide, 25 cks.
Antwerp, 155 t.
Apalachicolo, 380
Baltimore, 345
Banana, 50
Barbadoes, 50
Belize, 22 6 c.
Boma, 11
Boston, 1¼
Brisbane, 50
Cameroons, 87 15
Cape Town, 20 75 cs.
Carleton, 20
Chicago, 30
Conakry, 316 16
Egwanga, 130 3
Fredencia, 500
Fremantle, 20
Galveston, 750
Ghent, 125
Hamburg, 88 7
Johannesburg, 9 8
Lagos, 100
Landana, 15
Matadi, 10
Melbourne, 500
Mobile, 298
M. Video, 39
New York, 10
N. Orleans, 256
Old Calabar, 80 6
Opobo, 40 3
Para, 934 7
Pensacola, 450
Rio Del Rey, 8
Rotterdam, 150
St. John's, 50
Santos, 4 17
Sierra Leone, 110 14
Sydney, 180
Trinidad, 108 1
Truro, N.S., 10

Salt Cake—
Barranquilla, 6 t. £12
Hong Kong, 2 10 c. 7
Lisbon, 30 48

Saltpetre—
Macahyba, 1 t. 6 c. 3 q. £30
Rio G. do Sul, 6 6
Rosario, 19 2 21
Vera Cruz, 9 3 10

Satinite—
Calcutta, 3 t. 11 c. £10

Sheep Dip—
Algoa Bay, 250 dms. £103
Belize, 2 c. 6
B. Ayres, 43 t. 11 20 cs. 988
New York, 4 13 c. 65

Soap—
Accra, 50 bxs.
Algoa Bay, 2 cs.
Antwerp, 185
Arecibo, 27
Banoka, 40
Barbadoes, 405
Bata, 15
Batanga, 15
Belize, 1,000
Boma, 50
Bombay, 46
B. Ayres, 2
Calcutta, 175
C. C. Castle, 2
Cape Town, 351
Chicago, 1
Copenhagen, 50
Curacao, 1
Delagoa Bay, 80
E. London. 6 25
Fernando Po, 50
Galata, 25
Genoa, 112
Gibraltar, 328 20
Grenada. 15
Hamburg, 36
Johannesburg, 270 70
King William's Town, 10
Las Palmas, 340
Lisbon, 1
Livingston, 1
Madras, 107 11
Mannheim, 280
M. Video, 1
Montreal, 3 cks.
Mossel Bay, 17 200 bdls.
Old Calabar, 50
Opobo, 200
Palma, 478
Para, 100
Pt. Natal, 55 80 dms.
Pt. Said, 80
Principulca, 40
Progresso, 1
Rangoon, 65
Rotterdam, 280
St. John's, 610
San Fernando, 50
San Juan del Sur, 101
Singapore, 260
Teneriffe, 225
Toronto, 1,090
Trinidad, 1,500
Victoria, A., 50

Soda Ash—
Aalborg, 200 bgs.
Alexandria, 8 cks.
Bahia, 25 brls.
Barcelona, 100 pks.
Barranquilla, 20 100 cs.
Boston, 500 98 cks.
Brisbane, 283
B. Ayres, 417
Cadiz, 6
Calcutta, 26
Copenbagen, 910
Fiume, 200
Genoa, 525
Ghent, 466
Gothenburg, 300 80
Hamburg, 70 t.
Helsingfors, 10
Hiogo, 198
Lisbon, 200 bgs.
Madras, 10
Malta, 10
Melbourne, 10
Monterey, 17
M. Video, 58
Montreal, 80
Naples, 250
N. Orleans, 40 tcs.
New York, 18
Odense, 50
Oporto, 54
Philadelphia, 160
Rio de Janeiro, 25 brls.
Rio G. Do Sul, 70
Rotterdam, 1,000
Schiedam, 600
Sydney, 70 36
Venice, 30

Soda Crystals—
Alexandria, 100 brls.
Barranquilla, 5
Brisbane, 8 kgs.
B. Ayres, 200
Cincinatti, 68
Delagoa Bay, 30
Leghorn, 20
Malta, 50 10
Oporto, 25 cks.
Philadelphia, 140

Sodium Bicarbonate—
Alexandria, 30 kgs.
Antwerp, 30 bgs. 10 kgs. 8 cks.
Barcelona, 7 6 cs. 1
Brantford, 68
Brisbane, 500
Calcutta, 600
Danzig, 23 pks.
Delagoa Bay, 10 bgs.
Genoa, 150 45 cks.
Halifax, 100 kgs.
Hamburg, 20 12
Hiogo, 400
Johannesburg, 24
Madras, 20
Malta. 50 12 dms.
Marseilles, 20 3 cks.
Mayaquez, 20
Para, 10
Paris, 80
Rangoon, 45
Rio de Janeiro, 30
Rotterdam, 66
Sydney, 1,592 55
Vera Cruz, 50

Sodium Bichromate—
Oporto, 1 ck.

Sodium Chlorate—
Boston, 200 kgs.

Sodium Naphthionate—
Genoa, 2 cks.

Sodium Sulphate—
Barranquilla, 10 kgs.

Starch—
Copenhagen, 11 cks.
Pernambuco, 5 bgs.

Sulphur—
Boston, 150 t. 6 c. £641
Gothenburg, 185 917
Macahyba. 6 2
Maranham, 11 3 q. 4
Trinidad, 1 10

Sulphuric Acid—
Maranham, 12 cs. £15
Para, 8 c. 3 q. 6

Superphosphates—
Alicante, 50 t. £142
Barcelona, 200 575
Las Palmas, 5 17
Marseilles, 40 2 c. 73
Seville, 36 17 93
Valencia, 383 841

Varnish —
Demerara, 5 cks.
Malaga, 3
New York 4
Rotterdam, 3 cs.
Santander, 2 brls.

White Lead—
Bahia, 30 kgs.
Smyrna, 40

Zinc Chloride—
Bombay, 15 t. 10 c. 3 q. £203
Ghent, 1 10 19
Maranham, 6 5

MANCHESTER.

Week ending November 30th.

Alum—
Alexandretta, 70 brls.
Alexandria, 50

Ammonium Chloride—
Bagdad, 4 brls.
Beyrout, 20 cks.

Aniline Colours—
Germany, 5 cks. 1 cs. 5 kgs.
Holland, 2

Asbestos—
Bombay, 4 cs.

Caoutchouc—
France, 136 bgs.

Carbolic Acid—
France, 120 btls.

Caustic Soda—
Alexandretta, 50 dms.
Alexandria, 48

Chemicals *(otherwise undescribed)*
Basle, 3 cks. 25 kgs.
Mainz, 7 6
Germany, 1
Montreal, 55 tcs. 1 cs. 175 brls. pks. 75 hf.-trs. 60

Coal Products—
Aniline Oil
Germany, 10 dms
Benzol
Christiania, 6 cks.
Beta Naphthol
Belgium, 2 cks.
Naphthol
Germany, 12 cks.
Pitch
Belgium, 205 t. 13 c.
Tar Oil
Belgium, 3 dms.

Colours—
Belgium, 1 ck.

Copperas—
Bussorah, 50 cks.
Mohammerah, 20 brls.

Dyestuffs *(otherwise undescribed)*
Eureka, N.S., 20 bgs.
Magog, 1 ck.
Moncton, 100 bgs.
Ottawa, 25
Toronto, 130

Extracts—
Christiania, 5 cks.
France, 15
Sweden, 20

Farina—
Bombay, 10 bgs.

Gamma Acid—
Germany, 11 cks.

Gelatine—
Bombay, 2 cs.

Glue—
Germany, 10 cks.
Holland, 19

Glycerine—
Tunis, 3 cs.

Linseed Oil—
Alexandria, 30 brls.
Bagdad, 10 dms.
Beyrout, 2 cks. 17
Jaffa, 3
Larnaca, 2

Logwood—
Christiania, 1 ck. 50 bgs.

Myrabolams—
Christiania, 50 bgs.

Oxalic Acid—
Bushire, 4 cs.

Paint—
Bagdad, 112 kgs.
Jaffa, 10 cks.

Painters' Colours—
Jaffa, 6 cks.

Potassium Bichromate—
Bushire, 8 cs.
Sultanabad, 10

Rosin—
Beyrout, 12 brls.

Salt—
Gothenburg, 100 t.
Montreal, 500 12 c.

Soap—
Alexandria, 1 cs.
Bagdad, 20 bxs.
Bussorah, 200
Mohammerah, 50
Montreal, 86
Tunis, 9

Soda Ash—
Tripoli, 300 bgs.

Sodium Bicarbonate—
Bagdad, 30 brls.
Beyrout, 30 kgs.

Sodium Naphthionate—
Belgium, 28 cks.
Germany, 32 bgs.
Holland, 2 cks.

Sodium Silicate—
Sfax, 15 brls.

Whiting—
Larnaca, 6 brls.

Zinc Chloride—
Bombay, 6 cks.

HULL.

Week ending November 26th.

Ammonium Sulphate—
Bombay, 50 bgs.
Hamburg, 186

Asbestos—
Helsingfors, 50 bgs.

nicals (*otherwise undescribed*)
candria, 14 pks.
terdam, 25 cks.
werp, 10 cs.
gen, 10
bay, 1,325
istiania, { 31 356 slbs. 5 pks
enhagen, 4
zig, 4 5 2
henburg, 44 20
burg, 10 41
singfors, 6
achi, 566 5
igsberg, 7
York, 10
al, 14
tin, 2
burg, 14

nseed Oil—
candria, 36 c.
terdam, 996
werp, 477
leaux, 34
stiania, 17
kirk, 183
nt, 308
henburg, 102
burg, 502
igsberg, 305
rkoping, 101
erdam, 776
en, 1,436
kholm, 7
tin, 500

sote Salts—
werp, 267 bgs.

tuffs (*otherwise undescribed*)
York, 25 cks.

York, 17 cks.

ed Oil—
terdam, 204 c.
werp, 106
bay, 230
stiania, 32
theim, 63
nt, 7
burg, 42
erdam, 105

ire—
kirk, 80 t.

ral White—
kirk, 100 bgs.

—
werp, 12 cks.
chi, 5
en, 1 cs.

ers' Colours—
terdam, 3 cks.
werp, { 1 pk. 41 dms.
en, 3 cs.
bay, 703 92
on, 50
stiania, 1
enburg, 1 9
ingen, 6
ingfors, 200
chi, 286 6
York, 337 150
erdam, 11 1
en, 31
kholm, 10
in, 12 5 pks.

—
werp, 367 t.
kirk, 206
chi, 80 cks.

—
terdam, 44 cs.
en, 1
enburg, 3
burg, 1

ur—
in, 900 bgs.

w—
bay, 8 cks.
burg, 4

—
terdam, 6 cks. 5 brls.
en, 13
nhagen, 10
ig, 2
kirk, 15
erdam, 7

ntine—
enburg, 10 cks.

ish—
bay, 30 cks.
t, 1 1 cs.
t, 2
burg, 13 1

Helsingfors, 1
Karachi, 2
Rouen, 4
Stettin, 5
Stockholm, 1

GLASGOW.

Week ending December 1st.

Albumen—
U.S.A., £220

Alum—
Melbourne, £58 9s.

Ammonium Sulphate—
Amsterdam, 15 t. 4 c.
Barcelona, 161 6¾
Demerara, 30 10
Hamburg, 50 13
Valencia, 1,008 14¼

Barytes—
Gothenburg, £55

Bleaching Liquor—
Barcelona, 4 t. 17 c.

Bleaching Powder—
Calcutta, 30 t. 3 c.

Boracic Acid—
Melbourne, £74
Sydney, 59

Borax—
Amsterdam, £210
Danzig, 11 t. 4 c.
Riga, 12
Rotterdam, 79

Caoutchouc—
Huelva, £41

Carbolic Acid—
Rotterdam, £220

Castor Oil—
Gothenburg, £110

Chemicals (*otherwise undescribed*)
Rotterdam, £7 10s.

Coal Products—
Anthracene Oil
Gothenburg, £80
Creosote Oil
Lisbon, £350
Pitch
Bombay, £55
Caen, 800 t. £516 10s.
Calcutta, £117
Danzig, 89 19 c.
Gothenburg, 168
Hamburg, 21
La Rochelle, 1,319
Oporto, £78 14s.
St. Nazaire, 1,000
U.S.A., £55
Tar
Bergen, 5 t. 13 c.
Calcutta, £337
Danzig, 10 13
Madras, 77
Riga, 275 14
Tar and Pitch
Rangoon, £36 15s.

Cobalt Matte—
Rotterdam, £513

Dextrine—
U.S.A., £442

Extracts—
Canada, £174 10s.
Belgium, 59
Lisbon, 39 14
Victoria, 75 18

Hydrochloric Acid—
Adelaide, £63

Lead Acetate—
Bombay, £75
Lisbon, 20

Lead Nitrate—
Canada, £95
Rotterdam, 21

Linseed Oil—
Antwerp, 1 t. 5¾ c.
Christiania, 1 10

Litharge—
Bombay, £34
Johannesburg, 48

Logwood—
Melbourne, £26

Madder—
Calcutta, £28 15s.

Magnesia—
Adelaide, £31 10s.

Magnesium Sulphate—
Christiania, £10
Sydney, 61

Manganese Oxide—
New York, £220

Ochre—
Calcutta, £25

Paint—
Adelaide, £56 16s.
Bahia, £27
Bergen, 17¾ c.
Bombay, £53 15s.
Nickerie, 19

Painters' Colours—
Calcutta, £480
Cape Town, 37
Melbourne, 122
Oporto, 44
Rio de Janeiro, 127
Sydney, 897

Paraffin Wax—
Barcelona, £237 14s.
Danzig, 2 t. 11 c.
King William's Town, £144
Riga, 5 t.
Rotterdam, 110
Rouen, 45

Potassium Bichromate—
Barcelona, £1,361
Bombay, 104
Ghent, 58
Lisbon, 139
Melbourne, 170
New York, 801
Paris, 357
Rouen, 181

Potassium Cyanide—
Valparaiso, £230

Potassium Prussiate—
Barcelona, £279 11s.

Red Lead—
Bombay, £96 18s.

Salt—
Adelaide, 2 t. 11½ c.

Sheep Dip—
B. Ayres, £87

Soap—
Queenstown, 2 t. 10 c.

Sodium Bichromate—
Barcelona, 9 t. 6¾ c.
Bombay, £65
Ghent, 8 5¾
Paris, 3 10¾
Rouen, 9 7½

Starch—
Lisbon, £41 8s.

Sulphuric Acid—
Calcutta, £35
Nickerie, 1 t. 9 c.

Tallow—
Rotterdam, 2 t. 18 c.

Waste Salt—
New York, 50 t.

White Lead—
Natal, £4

TYNE.

Week ending November 26th.

Alkali—
Amsterdam, 51 t. 3 c.
Copenhagen, 1 14
Gothenburg, 10 13
Muhlgraben, 3 19
Riga, 35 14
Rotterdam, 10 18

Alumina—
Lisbon, 9 t. 14 c.

Ammonium Carbonate—
Copenhagen, 1 t. 1 c.

Ammonium Chloride—
Aalborg, 5 c.

Antimony—
Barcelona, 1 t.
Hamburg, 2 10 c.
Reval, 10
Rotterdam, 20

Arsenic—
Barcelona, 4 t. 19 c.

Barium Binoxide—
Antwerp, 10 t. 11 c.
Barcelona, 1 3

Blanc Fixe—
Antwerp, 10 t.

Bleaching Powder—
Amsterdam, 23 t. 8 c.
Antwerp, 16 8
Christiania, 19 17
Copenhagen, 3
Drontheim, 9 15
Gothenburg, 10 2
Hamburg, 22 18
Helsingfors, 65 3
Riga, 70 9
Rotterdam, 26 10

Caustic Soda—
Amsterdam, 1 t. 10 c.
Barcelona, 134 18
Christiania, 1
Copenhagen, 2 18
Hamburg, 20
Helsingfors, 5 4
Laurvig, 2 18
New York, 95 15
Reval, 6 7
Riga, 34 16
Rotterdam, 2

Colours—
New York, 6 t. 16 c.

Hydrochloric Acid—
Bilbao, 1 c.

Litharge—
Hamburg, 1 t. 15 c.
Riga, 40 15

Magnesia—
Barcelona, 7 t. 17 c.
Hamburg, 3 q.
Lisbon, 5

Naphthaline—
Riga, 52 t. 4 c.

Paint—
Antwerp, 1 t.
New York, 1 c.

Painters' Colours—
Rotterdam, 4 cks.

Pitch—
Riga, 23 t. 3 c.

Soda—
Amsterdam, 28 t. 13 c.
Christiania, 13 17
Gothenburg, 7 10
Helsingfors, 4
Rotterdam, 20

Soda Ash—
Hamburg, 6 t. 13 c.
Gothenburg, 119 16

Sodium Sulphate—
Antwerp, 110 t.
Gothenburg, 5

Sulphur—
Gothenburg, 55 t.

White Lead—
Lisbon, 3 t. 3 c.
New York, 5

GOOLE.

Week ending November 23rd.

Chemicals (*otherwise undescribed*)
Boulogne, 5 cks.
Hamburg, 23

Coal Products (*otherwise undes.*)—
Amsterdam, 111 cks.
Antwerp, 1 cs.
Boulogne, 55 1 80 tins
Ghent, 4
Hamburg, 9 6 dms.
Rotterdam, 2

Dyestuffs (*otherwise undescribed*)
Ghent, 4 cs.
Hamburg, 16 cks. 2
Rotterdam, 1 1

Painters' Colours—
Antwerp, 2 cks. 1 cs.
Boulogne, 2 4 2 dms.
Calais, 8 1 pk.
Ghent, 2

Pitch—
Antwerp, 535 t.

GRIMSBY.

Week ending November 26th.

Alkali—
Rotterdam, qty.

Caoutchouc—
Gothenburg, 2 cks.
Malmo, 1 blk.

Chemicals (*otherwise undescribed*)
Malmo, 2 cks.

Coal Products (*otherwise undes.*)—
Dieppe, 28 cks.
Hamburg, 35 btls. 4 pks.

Painters' Colours—
Antwerp, { 2 kgs. 1 dm. 2 cks. 1 pk.
Hamburg, 2 2 dms.
Rotterdam, qty. 11 pks.

Sulphur—
Helsingborg, 30 brls.

PRICES CURRENT.

WEDNESDAY, Dec. 7, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9 & 8/3		
,, Glacial .. .. ,,	35/-		
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	5	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/- & 33/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	0	0
,, ,, (grey) Hull .. .. ,,	10	0	0
Aniline Oil (pure) .. .. per lb.	0	0	5
Aniline Salt ,, ... ,,	0	0	4½
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	4	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/- to 25/-		
Coal Tar Products and Dyes :—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8¼
,, 50/90 ,, ... ,,	0	0	8¾
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	55	15	0
,, Sulphate .. .. ,,	18	10	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	25	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	10	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	17	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 66° O.P. .. .. ,,	0	3	9
Oils :—			
Cotton-seed .. .. per ton	15	5	0
Linseed .. .. ,,	17	10	0
Stearine .. .. ,,	25	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	14	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. per ton	22	5	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	15	0
,, Prussiate Yellow .. .. per lb.	0	0	6¼
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	7	6
,, Acetate (ex-ship) .. .. ,,	12	5	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Borate (Borax) .. .. nett per ton	14	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	0	0
,, Prussiate .. .. per lb.	0	0	5
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	0
,, ,, (Glauber's Salts .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5⅞
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	7	6
,, (Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	22	10	0
Tin Crystals .. .. per lb.	0	0	5¾
,, English Ingots .. .. per ton	85	10	0
Zinc (Spelter) .. .. ,,	24	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

CHEMICAL TRADE JOURNAL

AND

OIL, PAINT and COLOUR REVIEW.

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LATE ADVERTISEMENTS.

CHEMIST (Junior) seeks Situation in Works or Laboratory. Has Science and Art and L.C.C Certificates; some knowledge of mechanical work and drawing.—"F.B.," 59, Charlotte-street, Portland-place, London.

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A PRACTICAL MAN, with 25 years' varied experience in construction of modern plant and manufacture of high grade acid and alkalies, desires to treat with manufacturers as to erection of plant for economical manufacture, alteration, etc., etc. Good references.—C/o T. B., 14, Leamington-street, Park-street, Harpurhey, Manchester.

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Communications for the Editor, if intended for insertion in the current week's issue, should reach the office not later than **Tuesday morning.**

Advertisements.

Prepaid Advertisements of Situations Vacant, Premises on Sale or To be Let Miscellaneous Wants, and Specific Articles for Sale by Private Contract are inserted in the *Chemical Trade Journal* at the following rates:—

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

THE SMOKE NUISANCE.

IT is fast becoming a difficult matter to decide which is the greater nuisance—smoke, or those who, having just enrolled themselves as anti-smoke crusaders, seize the first opportunity of denouncing the nearest factory chimney.

Their speeches are mostly composed of lengthy exordiums, in which there is very often artistic merit, we admit, but when the point is reached there is usually a lamentable display of ignorance, or else a total collapse.

These preliminary vapourings are as abundant as the soot-laden vapours these reformers would suppress and, after all, about as harmless.

This week, however, we have met with a fresh indictment against smoke. We learn that it is affecting social questions, and is mainly instrumental in widening the gulf between class and class.

Such is the firm conviction and ultimate conclusion of a reverend divine who has this week treated us to the social and religious aspects of the smoke nuisance.

His deductions are arrived at in this way: Who will live without flowers and sunshine? Not those who can escape from towns, where abound such "pestilent vapours"—a rhetorical figure of speech for what is known to the unenlightened as smoke. But there are those who cannot afford to escape beyond the radius of the town's smoke-laden atmosphere, and so the classes are separated still further instead of being drawn together by closer daily intercourse, and the amalgamating influences of residential proximity. All this—and there is plenty more of it in the same Ercles' vein—is very interesting, but, as we said, when the exordium has been finished and the worthy divine comes to instance the offending causes that have evoked such denunciations, then what a falling off is there. He reaches the moral of his discourse, and backing his words with the evidence of experts, he announces, with the air of a man giving utterance to a stupendous discovery, that it is "quite possible for the manufacturer to consume his own smoke."

And yet we have no doubt that this reverend gentleman would think it irrelevant, and quite fail to see the point, if we reminded him of the fact that

> The flowers that bloom in the spring, tra-la,
> Have nothing to do with the case.

Perhaps he and his sympathisers will appreciate the force of this couplet more fully if we explain that we are thoroughly conversant with the fact that manufacturers can consume their own smoke. Indeed, we have so far found that in the matter of polluting the atmosphere with "gaseous" emanations, manufacturers are far more continent than the gentlemen who endeavour to reform them, and set them to rights generally.

Moreover, this is not only strictly true with reference to oratorical offences, but also in the matter of the amount of

smoke they relatively produce. Those who create fogs, bedim our towns, and begrime our statues and public buildings with smoke are not manufacturers, they are householders—and our worthy divine is one of them.

As far as the pestilential character of the vapours is concerned, the products which escape from a smokeless grate are far more pestilent than the soot-laden clouds belched forth by a factory chimney. Choke off every rivulet at its source and the sea will soon be a dry valley of sand. Stop the small but constant emission of smoke at low levels from the myriads of town-house and office chimneys, and the smoke evil will be banished.

But the majority of smoke reformers either will not face these facts, or are ignorant of them. Instead they will persist in eloquent discourses and tirades against what we may metaphorically describe as the flowers that bloom in the spring. Perhaps now a few of them will understand, and sympathise with us, when after an unusually long and zealous attack on manufacturers' smoke, our rejoinder is short, and merely refers them to a closer study of the parable of the beam and the mote. They will also then know that

That's what we mean when we say or we sing,
Oh *bother* the flowers that bloom in the spring.

COMBINATION IN THE BRITISH RUBBER TRADE.

A MEETING was held in Manchester on Wednesday of all the leading india-rubber manufacturers of the kingdom for the purpose of determining certain proposals with the object of bringing about a combination of practically the whole rubber trade. Previous to this meeting some more or less representative meetings have been held from time to time, and it was referred to this meeting to determine whether practical effect could be unitedly given to the project.

THE MAIN OBJECT

of the New Association of British Rubber Manufacturers is to control prices and output in view of the very severe competition which has come about within a recent period, and the consequent decline in prices all round. The proceedings on Wednesday were rather protracted on account of the adoption of rules, the appointment of officers, and other formal matters. But after considerable discussion it was determined to form the association, and a code of rules were adopted which, it is understood, contain a penalty clause in the event of any falling away from or breach of the joint agreements to sell at not less than a given price. It was at one time feared that the conflicting interests of various manufacturers would be a barrier to this somewhat drastic condition, but it was eventually found that this difficulty could be met and overcome—at all events to the satisfaction of those most immediately concerned. It ought to be stated that although prices may be to some extent advanced all round in consequence of this important decision, yet the advance will have to be of limited extent in consequence of the rapidly-growing competition in all departments of the rubber industry by French and German manufacturers, and also by American producers.

In both France and Germany manufacturers of rubber goods and cycle tyres are free from the restrictions of patent rights which so seriously hamper and handicap British manufacturers. This also applies to America, and although American tyres cannot be imported into England as far as the pneumatic tyre patents are concerned, yet they can be sent abroad to many parts, and thus they secure the business which would otherwise come to England. Even with this disability enormous quantities of fixed and single tube pneumatic tyres are sent to England from America at very cheap rates. Thus it will be seen that the objects which the association and combination that was

SUCCESSFULLY FLOATED

on Wednesday has set itself to accomplish will be attended with considerable difficulty; but we believe there was a general agreement that, under any circumstances, the trade is likely to benefit from the general enforcement and carrying out of the rules of the new organisation. Some of the largest firms in various parts of the country, including several in the neighbourhood of Manchester, are said to have lost a very large proportion of their business in the tyre department. These firms for a number of years have been manufacturing tubes and covers for the Dunlop Pneumatic Tyre Company, but as the Dunlop patents have only a few years to run, and having a heavy capital, that Company have determined to start works of their own for the manufacture of rubber for their tyres. For this purpose large premises have been erected at Birmingham, and the rubber for the Dunlop tyres is now produced there. The withdrawal of this business, and the consequent loss of profit, has had a great influence in determining the rubber manufacturers of the kingdom to combine for the protection of their trade and for securing the profit to which they consider they are entitled. Whether the new combine will be successful or not it is difficult to say definitely at present, and a great deal will depend upon how far the new situation thus created will stimulate the foreign competition from the countries named.

THE MANCHESTER SEWAGE SCHEME.

IT was reported at a meeting of the Corporation Rivers Committee on Monday, that the Chairman (Sir Bosdin Leech) and the Deputy Chairman (Dr. Dreyfus) had had an interview in London with Mr. Adrian, of the Local Government Board, with reference to the sewage difficulty. The experts appointed by the Corporation some months ago have presented an interim report, and in view of their recommendations the Committee asked for an extension of the time laid down by the Local Government Board for fulfilling certain requirements. An inquiry was suggested, and it was stated that the evidence to be produced would probably justify the Board in granting the borrowing powers required by the Corporation to the extent of £160,000. Mr. Adrian gave the deputation to understand that an inquiry would be held early in January. Moreover, as it understood that the interim report of the three experts has been formulated at the request of his colleagues by Mr. Baldwin Latham, C.E., some interest may attach to Mr. Latham's remarks in the course of a discussion after a lecture which was delivered in London last week by Mr. George Thudichum on the Bacterial Treatment of Sewage. Mr. Baldwin Latham said it appeared to be a settled matter that sewage could be dealt with successfully in the way described, and, as shown in many places, the means were at hand for solving the great difficulty of purifying the sewage of our towns before it goes into the watercourses. During the last two years experience showed that those who were working in this direction were public benefactors, and deserved the best thanks of the community, for not only did they show an effective method, but one which obviated large expenditure for chemicals.

THE FRATERNIZING INFLUENCE OF SCIENCE.—Science happily has no politics, and the French Association for the Advancement of Science, with the view of fraternizing with the British Association, has fixed its next Congress for September 14 to 22, at Boulogne. The office-bearers of the two Associations have agreed on a joint gathering at Dover during the two Congresses. Although the younger Association will thus cross the Channel to show its deferenee for seniority, it is understood that there will be a return visit. The French Association having thus, so to speak, broken the ice, it may be hoped that, just as it has already held a Congress across the Spanish frontier, it will before long receive and accept an invitation from some English town. The distance can evidently be no objection, for it has held two Congresses in Algeria and a third in Tunis.

FATAL ACETYLENE GAS EXPLOSION.—Mr. Alfred Burlingham, aged 32, son of Mr. D. C. Burlingham, jeweller, of High-street, Lynn, was making some experiments, last week in the manufacture of acetylene gas in an outhouse at the rear of his father's premises The generator was of the usual pattern, but the storer consisted of iron plates made into a box and soldered, having a piece of tubing attached without the usual burner for testing the light. A lad who was with Mr. Burlingham was instructed to light this tubing, and instantly there was a terrific explosion. The top of the box was blown off and fragments of the shattered iron struck Mr. Burlingham in the throat, fracturing his jaw. He was also struck on the temple. Death was instantaneous. The lad recovered after being unconscious for a time, and was found to be totally deaf. Mr. Burlingham was an active member of the Society of Friends.

HIGH STRENGTH HYPOCHLORITE SOLUTIONS.—Some interesting work in this direction has recently been described by Messrs Max Musprat and E. S. Smith With the growth of sodium hypochlorite solutions as commercial products the percentage of available chlorine has been increased from 8 to 15 % These gentlemen have succeeded in making stable liquid sodium hypochlorites containing as high as 35% by volume of available chlorine, but beyond this, or where all the free salt had been thrown out of solution, it appeared that no stable hypochlorite could exist. The presence of traces of iron as sodium ferrate materially reduced the stability and gave rise to the evolution of oxygen. This formation of gas has led one Liverpool shipping firm to regard the product as a "dangerous explosive," which is entirely incorrect. Further, the initial difficulties which gave rise to this misconception have been overcome.

The Patent List.

is compiled from Official sources in the Manchester Laboratory, under the immediate supervision of Davis and Alfred R. Davis, who report professionally alue of Chemical Patents.

ATIONS FOR ENGLISH LETTERS PATENT.

ap. S. V. Dardier. 23,034. November 28.
of Ignition Material for Matches, etc. R. E. A. Gans. lovember 28.
f Coke Oven Gases. B. H. Thwaite. 25,118. November 29.
of Artificial Marble Granite, etc. T. W. James. 25,155. 29.
Sulphuric Acid and Sulphuric Anhydride from Gases. lito. 25,158. November 29.
ts in Tanning. A. E. Vidal. 25,188. November 29.
ts in Smoke Consumers. J. McDonald, W. H. Klock, and l. 25,195. November 29.
own Refuse. E. Pilous, G. Ottermann, and E. Nauheim. 25,209. 29.
ers. W. Foster. 25,234. November 30.
aint. A. J. Boult. 25,275. November 30.
of Water Gas. A. J. Boult. 25,277. November 30.
ld Paint. G. Roberts. 25,381. December 1.
f Sewage. C. A. Atkinson. 25,383. December 1.
of Ozone. W. Elworthy. 25,388. December 1.
of Candles. W. O. Greig and J. H. Gardner. 25,397. Dec. 1.
f Sewage. C. A. Sahlström. 25,409. December 1.
r Producing Ozone. C. A Sahlström. 25,410. December 1.
f Zinc-lead Sulphide Ores. T. Twynam and T. W. Harbord. ecember 2.
of Nitrogen Compounds. A. Frank and N. Caro. 25,475. 2.
ulverulent Oxide of Lead, Tin, Copper. C. L. C. Berton. ecember 2.
n of Sulphuric Acid, etc. R. England. 25,558. Dec. 2.

ACTS OF LATEST COMPLETE SPECIFICATIONS.

racts are specially prepared for the Chemical Trade Journal, GHTS *of publication are* RESERVED. *This is the earliest racts of Chemical and allied patents accessible to the public.*

ts Relating to the Preservation of Carbides during Trans-
L. Roberts, 520, Manhattan Avenue, New York, U.S.A. Eng. Pat. ril 4, 1898 (under International Convention November 24, 1897).

s of carbide are packed in drums which can be sealed . The interstices between the lumps are filled in with wheat chaff. Before closing the vessels, all air is swept out of acetylene gas, and the containers sealed. The wheat ts contact between the lumps of carbide. There is one

ts in the Treatment of Wool Grease and of other like ces, and of Derivatives therefrom. J. Hopkinson, Marion-. Cowling. 26, Brook-street, and F. Illingworth, Heather Bank, ll of Bradford, Yorks. Eng. Pat. 29,612. December 14, 1897.

reatment of "brown grease," the inventors claim to obtain gh purity, a thick, neutral lubricating oil, and a soap. The t boiled with about half the amount of alkali required to ete saponification. The unsaponified fat is now salted out chloride or other soda salt, and the whole allowed to unsaponified fat rises and forms a super-stratum of anhy-. The sub stratum consists of soap and fat alcohols. The awn off and the sub-stratum first treated with alcohol and enzol, which dissolves the fat alcohols and rises to the top. removed and the fatty alcohols recovered by distilling off The remaining soap is finished in the usual way. An nethod is described for cases in which it is not necessary e lanolin separated from the fat alcohols.

mposition for the Manufacture of Artificial Stone, Cement, like. H. W. Gruner, Karnthnerring, 6, Vienna I. Eng. Pat. December 7, 1897.

k, &c., are held together by a magnesium-zinc oxychloride pared as follows :—4 litres of a 49° Tw. magnesium chloride mixed with ¼ litre of zinc sulphate solution of equal o this is added 70 c c. of 80 % acetic acid, and 100 c.c. of ion of isinglass soap in spirit. This is added to a suitable cork waste, burned town's refuse, ashes, &c., previously a proportion of calcined magnesia, which depends on the ness of the resulting product. The mixture is then applied for making floors, &c. When the surface is ground, an excellent mottled effect is produced. There are six figures showing how the composition may be applied.

An Improved Composition for Removing Paint or Varnish from Surfaces. H. J. Haddan, 18, Buckingham-street, Strand, London, W.C. (communicated by G. Zonca & Co., Kitzingen a/Main, Germany). Eng. Pat. 15,140. July 9, 1898.

The usual, strongly caustic compounds used for this purpose are injurious to wood, &c , and unpleasant to apply. The inventor produces a compound by dissolving 20 kilograms of 98 % caustic soda in 100 litres of water and thoroughly stirring in 20 kilograms of mineral oil. When emulsion is effected, 20 kilograms of sawdust are incorporated, and the whole passed through a colour mill to ensure uniformity.

LABOUR-SAVING APPLIANCES.

WE have received from Messrs. Graham, Morton, and Co., Ltd., of Leeds and London, a handy catalogue of labour-saving appliances made by that firm. In these days, when the cost of almost every manufactured article has to be reduced to the minimum, it behoves everyone to study such a list as this, and we feel sure that a perusal of it will in many cases lead to positive economy.

There is on page 13 an illustration showing how a belt conveyor is carrying coal from a coal truck to the boiler-house, at the rate of 45 tons per hour, and on the next page is shown a battery of three elevators raising coal to a height of 50ft. at the rate of 30 tons per hour per elevator.

The "push-plate conveyor" may be seen on page 18, and is much used for coke, salts, bones, clinkers, broken stone, and chips, while the steel tray conveyor for cement, ores, artificial manures, chalk, lime, and all heavy materials is shown on page 27. The vertical elevator for raising casks, barrels, bales, and bundles, with only one man to feed, is fully illustrated on page 40.

Everyone who has had any experience with elevators knows that the discharge of the buckets at the elevator head is a matter that requires looking into, so that it is sasisfactory to find in this list full descriptions of the "perfection discharge" elevator head, the "gradual discharge" elevator head, and so forth. A considerable portion of the catalogue is taken up with specialities relating to coke ovens, gas retorts, &c , while at the end of the book are many useful tables of interest to the millowner and mechanic Space will not allow of a longer notice, and we advise those who require labour-saving appliances to consult the original.

ACCIDENT AT A SOAPWORKS.—On Saturday last Mr. H. A. Pearson (coroner), held an inquest at the Police Court, Smethwick, concerning the death of James Ravenscroft (65), engine-driver, formerly residing in Watville-street, Handsworth, who was killed at the red-lead works, Smethwick, belonging to Messrs. H. Wiggin and Co. Major Roe (Government Inspector of Factories and Worshshops) was present, and Mr. A. Smith, of Birmingham, represented the owners. James Ravenscroft, son, stated that his father had had forty years' experience as an engine-driver, but had been at work at Messrs. Wiggin's only a fortnight. The jury returned a verdict of "accidental death," and recommended that the firm should place some fence around the wheel so as to prevent similar accidents. Major Roe said it was an unusual accident, but he had requested the firm to board the wheel up. Mr. Baeddecker (manager) added that the firm expressed their regret at the first fatal accident that had occurred at the works since its establishment, 63 years ago

OIL AND CHEMICAL FIRES.—A fire of a very destructive character broke out last week in a large oil-house at Bridge-street, Battersea. The outbreak originated in the shop through some unknown agency, and from its inception assumed a serious aspect. Alarming messages were at once sent to the nearest fire station, and thence to several others, and men with powerful steamers arrived quickly from Battersea, Wandsworth, Clapham, Brompton, Chelsea, Kennington, &c. Appliances were set to work with all possible haste, and torrents of water played skilfully from all necessary points. The fire, however, being fed by large quantities of oil, continued to extend furiously from room to room. Great masses of flame burst through the windows and doorways, and consumed everything within reach. The furniture, too, being of a highly combustible nature, increased the fierceness of the conflagration, which eventually destroyed the whole house and contents.—At the chemical manufacturing works of Wyley's, Ltd., Wheatley-street, Coventry, an outbreak of fire was discovered on Saturday last. The Dunlop fire brigade apparatus was immediately sent to the place, and the volunteer fire brigade, under Deputy-Captain Armshaw, quickly followed with an engine ; but in the meantime the firm's employés had extinguished, with the appliances kept on the premises, an outbreak which might easily have been of a serious nature.

Reports of Companies.

THE NON-POISONOUS "STRIKE ANYWHERE" MATCH SYNDICATE, LTD.

The first ordinary or statutory meeting of the Non-Poisonous "Strike Anywhere" Match Syndicate, Ltd., was held last week at Winchester House, Old Broad-street, London, E.C., under the presidency of Mr. William Oppenheimer, chairman of the syndicate.

The Chairman said: Gentlemen, I am sorry to inform you that I have been indisposed for the last few days, and, under the circumstances, I have asked Mr. Castle to undertake the duties that would have fallen to me on this occasion. Mr. Castle is better informed in the matters relating to the company than I am, and has all the details of the concern at his finger ends, so with your permission, I will ask Mr. Castle to act as chairman to-day.

Mr. Abercrombie Castle: Gentlemen, I am sorry that our chairman, Mr. Oppenheimer, is not up to his usual fighting form, but having been asked to lay before you the objects of this meeting, I will at once tell you that it is usual to hold such a meeting as this within four months of a company's existence. There is actually no business to be transacted at such meetings in the ordinary course, but I think there are certain matters connected with our company that I shall take this opportunity of laying before you. These meetings are called for the reason of giving general information to the shareholders, and I think it is your due to let you know exactly what has been going on since the formation of the company. A good many of the shareholders are, perhaps, not aware that at about the time this company was registered for the purpose of acquiring the Rosenthal patents, or, I should say, very soon afterwards, a rival match maker appeared on the scene, of the name of Cordes. I went very carefully into his invention, and gave a considerable amount of time to the results which he had achieved, and I thought on the whole that instead of having two rival matches, as this invention approached ours within certain limits, that it would be better to join hands with Mr. Cordes, and as far as we could, work unitedly with him for our mutual good, and the mutual exploitation of the match. Thereupon Mr. Cordes joined our syndicate, which now owns both the patents of Mr. Cordes and Mr. Rosenthal. I may mention that when going into the particulars of these two patents, that they do not clash in any way, and while for the moment we do not doubt that he is in the right with regard to his patent, we are equally convinced that we have undoubtedly achieved one of the safest patents with regard to the production of matches possible. As I have said, these two patents do not at all clash in any way, and it is some satisfaction to find that after some months, or even years, that these "strike anywhere" match patents have both arrived practically simultaneously at a successful result. That the advantages of these two inventions are pretty much on a par was very apparent as soon as the preliminaries were gone through. I think it is to the mutual benefit of both of us that we have been brought together. It would not be politic at this present moment to divulge the result of the co-operation, but I can tell you, without the least exaggeration, that I think it is highly important and immensely beneficial to all of us. There are certain points in common that each possess, and though the benefit of the co-operation is so apparent, even at this early stage, it will be even much more so as time goes on. As shareholders I think you will all recognise the advisability of the step we have taken, and will confirm the action the directors have taken, pending this meeting, in connection with the patents. We have taken out a good many foreign patents, and contemplate taking more. At present we have taken out patents in the following countries:—Austria, Belgium, Canada, France, Germany, Italy, Russia, United States, and Norway and Sweden. These patents have all been applied for, and the applications lodged in the respective countries. There are other countries to deal with, notably some of tht British Dominions, but for the moment, in these countries I have mentioned, there the patents have been actually applied for, and, as I say, the applications have been lodged in the respective countries.

Our war cry is "Prevention is better than cure." When matches are made by our patent there will be no dental extraction necessary before handling the materials, nor will people engaged in the manufacture be subjected to this terrible supervision which obtains in guarding against one of the most terrible diseases known. We may fairly appeal to the Government to abolish this dangerous manufacture, now that the substitute has been provided in every way. The process, so far from being more costly, is practically on all fours with what is at present in use. Why should not the Governments of all countries prohibit the use of yellow phosphorus as they have prohibited the use of naked lights in coal mines, and certain other things connected with steel grinding trades, and so on. No doubt the Government have hitherto felt their hands very much tied, because there has been no alternative that could be used as a substitute; but now an alternative has been brought to light, and one that will appeal to the English mind, an alternative that can be worked upon the same commercial lines as that at present in vogue. If our matches were more expensive to make, we should at once consider ourselves out of court, but it has been absolutely proved that our production can be manufactured on as economical lines as that at present in operation. We ought to strike as hard as we can against this crying evil in the match making business, and I am pleased to notice some members of the press here, for through them the world may know the great danger that surrounds the match industry at the present time has been overcome, and that a process has been brought to perfection that will make the manufacture of "strike anywhere" matches a harmless occupation. When we have brought about the adoption of our process for the manufacture of non-poisonous "strike anywhere" matches, I think we shall have done a great thing for the better protection of our workpeople.

You will find everywhere that the "strike anywhere" matches are the principal ones in use. I have the honour of being associated with a number of gentlemen who are determined to see this thing through. It is not a question of sentiment entirely, there is sentiment, I admit, in that we naturally wish to be of some benefit to our fellow creatures; but we are determined to see this thing through, and when I say that among the gentlemen associated with us there are a number of substantial financiers, I think you will admit with me that I have some reason for speaking so confidently, and it is an evidence that our concern is a substantial undertaking, seeing the men we have at the back of it. The first people who take up our non-poisonous "strike anywhere" match process without prejudice, and with a desire to make as much of it as possible—there may, perhaps, be some weak spot in the match, but I do not admit it—I say those people who take it up with an earnest desire to co-operate with us will be held up as being the pioneers of a system which recognises that it is not all a question of dividends in producing these articles. I am going to ask you to increase the Board of Directors. On a previous occasion when we met, Mr. Sechiari and Mr. Oppenheimer kindly consented to act with us, and they have given us a great deal of their valuable assistance. They retire, but are eligible for re-election, and I shall ask you to re-elect them, so that we may have a full board to carry on the business of the syndicate. It has been very inconvenient up to the present, only having two directors, therefore we propose to extend the number, and I am going to propose that Mr. Adams be nominated to a seat on the board. This gentleman has been associated with us for some time; he is connected with Mr. Cordes, who has a very large interest in the company, and who has asked us to elect Mr. Adams as a director. My knowledge of that gentleman from the time I have been associated with him, makes me certain that his election will be a desirable one in every way. The other gentlemen who we would propose for your selection of directors are Mr. Henry Cock, of Kingston, who was the Hercules who first stepped into the breach; then there is Mr. Philip Castle, and I personally should like you to elect me, and I promise you that I will do the best that lies in my power for the interest of the company. The resolution I shall put to you is this: "That the Board of Directors be increased to a number not exceeding seven, and that Messrs. William Oppenheimer, Parasqueva Sechiari, Henry Cock, Abercrombie Castle, Philip Castle, and William Adams be elected as directors of the company."

Mr. G. Sechiari seconded the motion, which was unanimously agreed to.

An extraordinary general meeting was subsequently convened for the purpose of passing the subjoined resolution:—

"That the regulations contained in the printed document submitted to this meeting, and for the purpose of identification subscribed by the chairman thereof, be, and the same are hereby approved, and that such regulations be, and that they are hereby adopted as the regulations of the company, to the exclusion of all existing regulations thereof."

Mr. Abercrombie Castle, in explaining the matter, said that the existing articles were not the best for the company to work under. They were very cumbrous and old-fashioned. He would not waste their time by referring to the new articles in detail, but he might just mention that the article referring to directors' fees did not set down any specific sum, but that the remuneration was to be left to the shareholders to fix when the general meeting was held.

PEGAMOID, LTD.

The directors, in their report to September 30th last, state that it is probably generally known to the shareholders that considerable changes have taken place in the constitution of the directorate. These changes were the outcome of the report of an advisory committee appointed at a meeting of the shareholders most largely interested in the company, held on July 21st, to confer with the old board of directors as to the position and prospects of the company. Upon the issue of this report the board of directors, with one exception, resigned, having previously elected Messrs. Cross, Fraser, and Haes to take their places. The new board having come into office a few days before the financial year their proceedings have, of course, in no way affected the result of the year's

With regard to the balance sheet the directors wish particularly he attention of shareholders to the figures which refer to the f the factory. Although represented by an amount of only , the factory, plant, and machinery have been valued by Messrs. ker and Sons at £11,500, which they consider a low estimate. sum were shown in place of the smaller one there would have small credit balance to carry forward to the current year. The , it may be added, was acquired by the company in satisfaction bt of £15,000.; but the only sum of money that passed was that ppears in the balance sheet, and for which the factory was mort-

The directors have cut down expenses in every possible way, tend working the business on the lowest expenditure possible ible with efficiency. Strenuous efforts are being made to push nore particularly of printing, bookbinding, and upholstering ls. New fabrics are being brought out at greatly-reduced prices, eady the results are appreciable in the recent opening of many counts. The directors look with hope to the future, and believe th energy and the greater facilities afforded by a fully-equipped much better results may reasonably be expected during the year. The profit and loss account shows a loss on trading of and a total debit balance carried to balance sheet of £8,049.

GALENA MINES, LTD.

directors' report to October 15th last states that at the meeting st year the directors were sanguine as to the prospects of the ut as work progressed disquieting rumours reached them. They re decided to dismiss Mr. Callahan and appointed Mr. E. B. who has since been in charge of the property. Mr. Fraser was ession of Messrs. Hand and Griffiths' report, and, his views ing with theirs as to the advisability of continuing the develop-ork, developments were continued in the hope of recovering the A great deal of practical work has been done; unfortunately, alts so far have been disappointing. It seems to be the general in the district that a large body of good ore exists within the ries of the property; the claims are strewn in many places with locks of galena, and there is an outcrop of galena for some e along the surface. This ore, containing silver, lead, and zinc, wn to a depth of about 100 ft.; below this depth we have not ccessful in finding it, the country being very much broken and ed. The working capital of the company is exhausted; the n arises whether it is better to stop operations and await develop-n the adjoining mines, or whether the company should be wound efforts made to dispose of the property. The properties are lly freehold, and can therefore be retained by the company at a atively small annual expenditure. The position has been very ly considered by both the board and the engineer in charge, Mr. Fraser; expenses have been reduced to a minimum, and work mine is now confined to cross-cutting the country at the 100 ft. the hope of finding payable ore. The directors are anxious to e position fully discussed at the coming meeting, with the object ding upon the course of action to be taken.

LAGUNAS NITRATE CO., LTD.

directors, in their report for the year ended June 30 last, state e Board thought it prudent to close the oficina at the end of , and the trading profit shown is the result of only nine months g. The gross trading profit on the company's production for riod amounts to £34,342. Due attention has always been paid maintainance of the company's property in an efficient working on. The litigation which has ensued from the directors' efforts re for the shareholders relief in respect of the promotion of the ny has been only partially successful; but, under the advice of unsel and solicitors, the Board decided to carry the company's efore the Higher Courts, and it is expected to be adjudicated very shortly. Messrs. W. and J. Lockett preferred a claim the company for commissions under an agreement made by the l directors of so onerous a character that the present Board felt lves justified and even compelled to defend the claim. The o far has been adverse to the company, and although the costs action have been comparatively small, the amount of com-is ultimately due will be very large, and no services whatever een rendered for them. The necessity for a combination among ers to limit production to the requirements of consumption has idely recognised, and it is hoped that the efforts now in progress ct this combination will be successful, and thereby place the industry on a profitable basis.
s is the third year without a dividend.—ED. *C.T.J.*]

AMERICAN CHEMICAL BYE-PRODUCTS CO.—The Birming-Ala., Bye-Products Manufacturing Co. has been incorporated, . H. Smith, of Atalanta, as president. The company has a tar at Ensley City adjoining the Semet-Solvay bye-products plant. ated that the company will manufacture tar-roofing paper.

Correspondence.

**** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

MOLYBDENUM IMPORTS.

(*To the Editor of the Chemical Trade Journal.*)

SIR,—I have been trying for some time to get some information relative to the imports of molybdenum, and of the uses to which it may be put. Can any of your readers help me in this endeavour?

I am, etc.,

Dec. 8th, 1898. STATISTICS.

KELP AGENTS.

(*To the Editor of the Chemical Trade Journal.*)

SIR,—Can any of your readers let me know the names of agents in Ireland or Norway for kelp, or dry sea weed? and oblige

Yours, etc.,

HALOGEN.

BARYTES, CARBONATE AND SULPHATE.

(*To the Editor of the Chemical Trade Journal.*)

SIR,—I shall be much obliged if you, or any of your readers, will inform me what is the present market price both of carbonate and sulphate of barytes, and give me the analysis required for the price stated; also, what these minerals are chiefly used for, and where the principal markets are to be found.

I am, etc.,

INQUIRER.

[N.B.—Replies to the above can be addressed to our correspondents, c/o the *Journal*, and will be forwarded.—ED. *C.T.J.*]

SOCIETY OF CHEMICAL INDUSTRY.

SCOTTISH SECTION.

The December meeting of this section took place on Tuesday, the 13th, in the Rooms of the Religious Institution, 200, Buchanan-street, Glasgow. Professor G. G. Henderson, chairman of the section, presided, and there were also present on the platform Mr. George Beilby (president of the society), Mr. E. C. C. Stanford (ex-president), and others. The attendance was an unusually large one, a good number being present who were not, as yet, members of the society, being attracted thereto by the peculiar character of the paper announced for the reading of the sitting. After the reading and approval of the minutes of last meeting, and suitable reference accorded to the acknowledgment, in writing, made by the President for the motion of appreciation passed at that meeting, the main business was reached. This was a descriptive paper by Mr. Adam Millar on "The Manufacture of Artificial Silk from Gelatines." Mr Millar has for some time past been diligent in his researches in this direction, and apparently not without some remarkable results. After experimenting with various kinds of gelatines, and in various methods of manipulating them, he has succeeded in producing artificial silk in bobbin thread form, which in appearance, feeling, and strength makes a remarkable approximation to the article got from the natural exertions of the silkworm. The gelatine is pressed through a tube with minute apertures at the end. The fine threads issuing therefrom are received immediately on a series of winding drums, which lead eventually to the final bobbin. This occupies a matter of seconds only, but by the time the bobbin is reached, this curious thread fabric is dried, hardened, and strengthened, to a degree which permits of its employment in textile manufacture, in a way similar to that in the case of the natural silk. Mr. Millar has succeeded in applying a large range of colour, and he confidently anticipates that this range will be yet greatly extended. He admits frankly that the textile strength of the artificial thread is much below that of the natural fabric; but the strength he has already achieved, is, he thinks, really already a wonderful quantity, and he has no doubt it will in time be greatly increased. He trusts to the resources of the art of the chemist for that, and for the remedying of some other present shortcomings of smaller moment. There is much still to be learnt in the direction of procuring those sorts of gelatines which will best lend themselves to the new industry, for Mr. Millar is confident that the discovery has a career before it as an ladustry. The main part of the reading was supplemented by remarks "on a method for ascertaining the relative merits of different samples of gelatine."

THE OUTLOOK IN COPPER.

COPPER bears to electricity almost the same relation which iron does to steam. Every such step in the progress of electricity as that which consists in the harnessing of the Rapids of Niagara for the service of mankind involves an extension of the use of this metal, and the line of factories which has already sprung up along the road from Buffalo to Niagara, supplied with motive power, heat and lighting from the Rapids of the Niagara or St. Lawrence Rivers, means that so much more copper is required for this purpose alone. It is the same with the extension of electrical tramways and the development of the use of brass and other mixed metals in other departments of industry. The demand for copper, in fact, is certain not to diminish, and to all appearances must very largely increase within the next few years. We are obviously entering upon an electrical period. For cables alone a heavy demand is expected to at once arise, as soon as the political situation becomes a little clear. In such conditions it is natural that we should look at the copper supply with a view to forming a judgment as to how far the mines at present in full work can meet the present, and more especially the future, demand. The outlook at the moment is scarcely encouraging to those who look for a cheap supply of this most important metal. For some years past, owing to various causes—of which the attempt to maintain an absurd level of price ten years ago and the general shrinkage of the value of all commodities with reference to gold are taken as the main causes—the price of copper has been so low as to render unremunerative many of the mines which previously could produce at a profit. It may safely be said that any mines which have contrived to pay their own way during this period of extremely low values, even if they have done so only on a moderate scale may now expect to have a prolonged time of prosperity to make up for their previous low dividends, unless, as is the case with Cape Copper, the outlook at the mine is the reverse of encouraging. Even those which have been carried on at more or less loss, rather than shut down, and thus throw the whole machinery of their enterprise out of gear, may look forward to participate in the coming boom.—*Financial News.*

ACETYLENE AND CARBIDE NOTES.

SINCE interest in calcium carbide and acetylene as an illuminant became so general, many applications on a large and small scale have been made, and innumerable devices have been proposed for generating and using the gas. Early in the history of the subject the well-known firm of Julius Pintsch, of Berlin, took up the investigation of acetylene, with a view of using it in connection with the illumination of railway carriages, and the results of the numerous experiments are now given in a paper in *Glaser's Annalen*, written by Dr. H. Gerdes, under whose supervision the investigations were made. At the present time calcium carbide is sold in Germany for 30 to 40 pfennigs per kilogramme—a price which may be lowered when the greater output of the numerous projected works is placed upon the market. This commercial carbide varies in value in proportion to its purity, and the average yield of acetylene from that now sold is 250 to 280 litres of acetylene per kilogramme, the theoretical yield from pure carbide being 340 litres. The general rush to experiment with acetylene resulted in numerous disasters, so that warning soon was given as to its dangers. It was said to be very poisonous, to form dangerous detonating compounds with copper and copper alloys, and to be as readily explosive in the pure state as other combustible gases are when mixed with air. These points have been carefully investigated, and the attempt made to arrive at the facts as they exist in practice. The poisonous nature of acetylene was readily tested, and it has now been clearly established that it is no more poisonous than ordinary coal gas. The second question, however, was not so readily settled. A number of steel vessels were prepared and filled with alloys of copper with other metals, such as zinc, tin, nickel, &c., the alloys being made in the form of rods which could be filled in crosswise in such a manner as to expose a large amount of surface to contact with the gas. Each vessel was then filled with a different mixture of acetylene with oil gas, and with coal gas, and one was also filled with pure acetylene, at a pressure of 10 atmospheres, a small quantity of water being also added to ensure the presence of moisture. The vessels were then permitted to lie on an exposed roof for nine months, subject to the heat and cold of summer and winter, after which a careful examination was made of the contents. The results were negative, no acetylides being found of any explosive character whatever. It was determined, however, that pure copper would form a detonating compound with acetylene, but only after long contact of the copper with large quantities of the gas—conditions which are not met in practice. It is now clearly established that pure acetylene does not explode at ordinary pressure, and that any decomposition or polymerisation effected by heat is not transmitted through the mass, but is limited to the point of application of the heat. Such explosions as *have been* caused by the application of heat to closed vessels containing acetylene have occurred only after the heating has caused such an increase in pressure as to permit explosion. Under these circumstances it may be accepted that pure acetylene may be generated and stored in an ordinary gasholder with no more risk than is involved in similar work with the ordinary illuminating gas, and so far as safety is concerned it may be used freely when only reasonable caution is exercised. Gerdes prefers to generate the gas by plunging the carbide into a comparatively large bulk of water, and in the apparatus which he uses there is little novelty other than in minor details of arrangement. Such the apparatus is designed for the generation of acetylene to be mixed with oil gas for the purpose of storage in cylinders for use in lighting railway carriages, it is important that the predetermined mixture should be maintained. This is accomplished by the use of two meters, through which the oil gas and the acetylene are respectively passed, the drums of the meters being so geared together as to deliver the desired proportions of the two gases into the mixing main. The proportions usually employed are 75 per cent. of oil gas and 25 per cent. of acetylene—a mixture which gives four times the illumination obtained from oil gas used alone. To determine the danger of using the mixed gases compressed in cylinders, numerous experiments have been made, and it has been found that neither shocks or heating, within the possible limits of practice, produce explosions in mixtures containing less than 50 per cent. of acetylene provided no oxygen is present. The assertion is distinctly made that there is no greater danger with the compressed mixture than with compressed coal gas, or even compressed air. Gerdes gives some interesting points about the production of phuretted hydrogen when impure carbide is used, and shows the importance of purifying acetylene generated from such material.

THE BRADFORD DYERS' ASSOCIATION, LTD

THE board of the Bradford Dyers' Association, Limited, which this week invited public subscriptions for shares, will consist of 37 gentlemen connected with the various companies and firms to be amalgamated under that title. Mr. J. R. Armitage, J.P., will be chairman; Mr. Henry Sutcliffe and Mr. Abraham Grandage will be vice-chairmen; and there will be three managing directors—viz., Mr. George Douglas, Mr. Milton S. Sharpe, and Mr. W. H. Aykroyd. Amongst the 37 directors is the Mayor of Bradford, Mr. W. E. Aykroyd, J. P. The trustees for the debenture-holders will be Sir Edward Ripley, Bart., D.L., J.P., Mr. James Sharp, and Mr. Charles Tetley Smith. The London City and Midland Bank (London, Bradford branches) heads the lists of 12 banks and their branches, and the London brokers will be Messrs. Panmure Gordon, Hill and Co., Messrs. Lumsden and Myers. The 22 combining firms of dyers are George Armitage, Limited, Bradford; William Aykroyd and Sons, Bradford; the Bradford and District Dyeing Company, Limited, Halifax; George Briggs and Sons, Cleckheaton; Craven, Pease and Co., Limited, Brighouse; the Fountain Finishing Company, Bradford; W. Grandage and Co., Limited, Bradford; Harry Hall and Co., Guisely; the Hunsworth Dyeing Co., Limited, Cleckheaton; Samuel Kirk and Sons, Leeds; John Mitchell and Co., Keighley (whose slubbing works at Keighley are not, however, included in purchase); James Reffit and Sons, Leeds; Edward Ripley and Sons, Bradford; James and M. S. Sharp and Co., Limited, Low Moor and Heckmondwike; Shaw and Co., Shipley; John Shaw and Co., Bradford; Sam Shepherd and Co., Yeadon; Samuel Smith and Sons, Limited, Bradford; John H. Stott and Co., Bradford; Thomas Hannam, and Marshall, Brighouse; Ward and Sons, Limited, Halifax; Whitaker Brothers and Co., dyers, Limited, Newlay.

There will be no change in the management of the various firms, but it is arranged that the managing directors of the new company will retire from their present firms and devote themselves entirely to the business of the association. Messrs. Edward Rushton, Son and Kenyon's valuation of the property and plant shows £1,943,218, the stocks-in-trade, guaranteed book debts, and cash in hand are at £246,034, making the total assets to be acquired £2,189,252. There is also provided by the forthcoming issue additional capital to the amount of about £129,360. Messrs. Jones, Crewdson and Young, of London and Manchester, who have a special knowledge of industrial amalgamations, certify that "the aggregate average profit of the firms now amalgamated has been the annual average sum of £225,656. 16s., a rate of profit more than sufficient (according to the prospectus) to provide for dividends of 4 per cent. on £1,000,000. debenture stock, 6 per cent. on a £1,000,000. preference shares, and 7 per cent. on £1,000,000. ordinary shares. It is contended, however, on the strength of the auditors' certificate, that the past earnings of the various firms really show the ability of the new company to pay 13 per cent. on the ordinary shares, without reference to the savings which the directors may confidently anticipate.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for October, 1898, as compared with October, 1897 :—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	46,083	23,698	12,794	7,004
Sweden and Norway	8,085	18,299	1,709	4,462
Germany	23,709	12,277	5,270	2,841
Holland	14,369	9,807	2,532	2,114
France	2,785	5,470	972	1,927
Spain and Canaries	33,053	37,539	10,946	11,930
Italy	27,949	28,275	7,364	8,269
United States	137,953	52,757	27,842	11,814
Australasia	14,299	22,331	4,714	,274
British North America	38,318	43,742	8,767	10,440
Other countries	137,288	121,044	37,577	35,582
Total	483,891	375,239	120,487	102,657

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	75,618	60,869	23,247	15,307
Other countries	50,692	42,329	16,406	12,762
Total	126,310	103,198	39,653	28,069

OIL FUEL FOR STEAMERS.

THE owners of steamers trading from Europe to India or the Far East know that they may rely upon obtaining coal at Port Said, Suez, Aden, Perim, Bombay, Colombo, Singapore, Hong Kong, and other places ; while oil has only been obtainable at particular ports, which, for the most part, are not convenient places of call. It is now announced, however, that from and after the middle of next year steamers may also rely upon obtaining adequate supplies of oil fuel at most of the above-mentioned ports. Reference has been made on several occasions to the enterprise of Messrs. M. Samuel and Co , the managers of the "Shell" line of steamers, in connection with their vast oilfields in North Borneo, and Sir Marcus Samuel has stated that the oilfields which had been secured by his firm were capable of yielding sufficient oil to take the place now occupied by coal, and that his firm would be prepared in the course of a few months to supply oil to steamers from a number of stations east of Suez at a price that would enable it to compete very successfully with coal. Messrs. Samuel and Co. have since been engaged in perfecting their arrangements for the rapid output and shipment of oil at Borneo, and in completing their storage stations at the various ports selected for the purpose ; and we understand that an actual commencement has now been made in the business of placing Borneo oil on the market. Cargoes of this liquid fuel have already been landed at Singapore and Hong Kong, while a cargo is en route for Bombay ; and evidences are not wanting to show that the importance of the trade is appreciated by the public authorities at several of the ports concerned. It is claimed for the oil from North Borneo that 1 ton is equal to at least 2½ tons of the coal usually obtainable in Eastern waters, and, moreover, it will be supplied with a guaranteed flash point of over 200 deg. Apart from the great advantages incidental to the use of oil fuel—in dispensing with stokers, saving time in bunkering, less weight carried, and less space occupied—the prices show a large actual money gain, as compared with the cost of coal. Messrs. Samuel have certainly shown their own faith in the future of liquid fuel, for they have entered into contracts for the conversion of the whole of their fleet of fifteen steamers for burning oil. The enterprise of the "Shell" Line certainly marks an important new departure in connection with our commerce over the seas, and its progress and development will possess a very real interest for those concerned in steamship management.

SOCIETY OF CHEMICAL INDUSTRY.—*Nottingham Section.*—The third meeting of the session was held on Wednesday, December 14th, 1898, at University College, Nottingham, at 7 p.m., when the following papers were read : 1. "An apparatus for heating sealed tubes at a constant temperature," by Dr. J. J. Sudborough. 2. "Note on the preparation of the two isomeric beta-bromcinnamic acids," by L. L. Lloyd and Dr. J. J. Sudborough.

OWENS COLLEGE STUDENTS' BAZAAR,

OPENING BY THE DUCHESS OF DEVONSHIRE.

ON Thursday afternoon, in the St. James's Hall, Manchester, the Duchess of Devonshire opened a bazaar organised by the students of Owens College and their friends with a view to raising a fund to meet the expense of laying out the new athletic ground on the Firs estate, Fallowfield. The land, some twelve acres in extent, has been presented by Messrs. R. C. Christie and R. D. Darbishire, the legatees of Sir Joseph Whitworth, and by Messrs. E. T. Broadhurst and J. B. Close Brooks, the legatees of Lady Whitworth. Since the time it was decided to hold the bazaar so much energy and enthusiasm have been devoted to the project that it could hardly have resulted in anything else than one of the best arranged and most attractively stocked bazaars ever held in the hall. In addition to obtaining many influential patrons, headed by H.R.H. the Princess Louise and the Marquis of Lorne, M.P., the executive committee and various other subsidiary committees have superintended the arrangements for no fewer than thirteen stalls and the preparation of a varied programme of entertainments extending over the three days the bazaar remains open. The chief officers of the executive committee are :—Principal Hopkinson (president), Professor H. B. Dixon and Mr. E. Donner (vice-presidents), Messrs. Edward Moir and F. Winn Walker (hon. secretaries), and Mr. Norman Melland (hon. treasurer). They have had the co-operation not only of gentlemen connected with the college, but of a number of ladies. In every direction, indeed, untiring help has been given by the fair friends of the promoters, whether in collecting the thousand and one articles which find a place on a bazaar stall, in artistically displaying the same, or in devising one or other of the many plans of adding to the receipts. The various stalls and their presidents are as follows :—Arts and law : Mrs. Hopkinson and Mrs. Geo. Behrens ; engineering and physics : Mrs. William Mather ; chemistry : Mrs. Levinstein ; natural history : Mrs. Donner and Mrs. W. Boyd Dawkins ; medical (1) : Mrs. Leech and Mrs Mould ; medical (2) : Mrs. Tom Jones and Mrs. Walter Whitehead ; medical (3) : Mrs. Young and Mrs. Lloyd Roberts ; advertisement Stall : Mrs. Harold Snape ; department for women : Mrs. Schwann ; Dalton Hall : Mrs. Graham and Miss King ; photographic : Mrs. Perkin ; sweets and toys, Mrs. Grommé ; books : Prof. F. E. Weiss ; flowers : Mrs. Meek and Mrs. J. G. Groves. The entertainments will include a comedietta, "The Deacon," presented by Miss Meldrum's company ; a musical comedy, "Papa's Wife," and a comedy, "Lady Fortune," both presented by the students. There will also be performances by the band of the Royal Artillery, by the ladies' choir, the college orchestra, Mr. Grimshaw's Banjo Band, gymnastic displays, cafe chantant entertainments, "grand varieties," and the inevitable but always amusing washing, hat-trimming, and pig-drawing competitions.

There had wisely been no lavish expenditure on a vain attempt to convert the hall into a "Swiss Village," or any other picturesque place, but nevertheless the interior of the huge building, with its daintily-draped and electrically-illuminated stalls, presented a bright and attractive appearance. Care had been taken to leave plenty of room for the free movement of visitors, and in many little ways there was evidence of good management. Soon after noon, when the bazaar was opened to the public, there was quite a large gathering in the hall. Always pleasantly conspicuous were the women students, who wore scarlet academic gowns over white dresses, and becoming "mortar-boards" of the same colour. Many of the stall-holders wore charmingly distinctive dresses, whilst there were all kinds of fair itinerants whose costumes could not fail to attract equally with the flowers and the sweets shyly offered for sale. Of students with badges there were no end, and right well was the dignity which they conferred upheld.

THE OPENING CEREMONY.

When the inaugural ceremony took place at two o'clock, there was a very large attendance. Her Grace was accompanied by the Duke of Devonshire, whose interest in the College has always been a very keen one.

Mr. E. Tootal Broadhurst presided, and amongst those on the platform in addition to the distinguished visitors, were Mr. C. E. Schwann, M.P., and Mrs. Schwann, Principal Hopkinson, Mr. W. Mather, Alderman Joseph Thompson, and Alderman John Hopkinson. The Duchess, who was cordially received was presented with a bouquet of lilies of the valley by Miss Phyllis Dixon.

The Chairman stated the object of the bazaar. The new athletic ground, he said, was not without considerable natural beauty. At present it was only farm land and in the rough. To lay it out as a proper athletic ground would entail a considerable cost, in addition to which there would be the cost of a pavilion The whole cost of these works was estimated at about £5,000 , and it was to raise this sum that the bazaar had been organised. It sounded a large sum of money, but

he thought it was not in any way larger than the students deserved and hoped to receive. The new ground being the absolute property of the college the whole of the money would be spent for the permanent and lasting benefit of the college for generations to come. What was of permanent benefit to the college was of permanent benefit to the whole of the city of Manchester. The existing ground at Mabfield was only held on a short lease, and it had become too small. Each winter a terrible thing happened, for football had to be played on the cricket pitch. (Laughter, and a voice "Shame."). The old ground had been in use since 1880. For many years past great efforts had been put forward on behalf of what he might call the scholastic side of the college. It was time that an effort was made on behalf of the recreative side, and this was now being done. The formation of character was a most important matter, and he believed that character was more formed, at any rate quite as much formed in games and in the playing fields as it was in the study and the lecture hall. Such an educational centre as Owens College was not really complete without a thoroughly equipped recreation ground. Some such thoughts as these must have been present in the minds of the donors in making that gift. Referring to the presence of the Duke and Duchess, the chairman said that Owens College owed much to the Dukes of Devonshire, its president for very many years past, and their kindly debt was sensibly augmented that day. Especially did they welcome Her Grace, the Duchess, and they would accept the fact of her opening the bazaar as a sure and happy augury of its complete success. He would now ask Her Grace to declare the bazaar open.

The Duchess of Devonshire, who was received with cheers from the students and general applause on rising to perform the ceremony, said that she had great pleasure in declaring the bazaar open, and she wished it every success.

Professor Dixon proposed a cordial vote of thanks to the Duchess, and, in doing so, said that, in giving the ground, the legatees of Sir Joseph and Lady Whitworth had really made a double gift, for in addition to the ground, which they hoped to see the finest for all manner of games in the North of England, they were securing for ever what was literally a breathing space in the midst of Manchester's busy life.

Dr. Wylie (chairman of the Owens College Union) briefly seconded the proposition, which was carried with enthusiasm.

The Duke of Devonshire then delivered a short address on the advantages of physical training, at the end of which the business of the bazaar was begun. The attendance was good, and the results promise to be satisfactory.

Trade Notes.

Federation of Scotch Coalowners' Associations. — An association of all the Scotch coalmasters, excepting those of Fifeshire, has been formed. The Association, which is practically an amalgamation of the Lanarkshire, Ayrshire, Airdrie, Bathgate, Slamannan, and Stirlingshire Associations, will place the masters in a strong position to deal with all matters affecting the trade. The Association will also include a mutual benefit scheme for protection against the Workmen's Compensation Act.

The Barrow Steel Company and the Compensation Act.— The notice issued by the general manager of the Barrow Steel Company intimating that no men can be engaged above 50 years of age has raised considerable discussion in the town. The Trades Council after debating the matter decided to communicate with the Duke of Devonshire, the chairman of the company, and with the secretary of the Parliamentary Committee of the Trade Unions Congress with a view to bringing it before the House of Commons. One member said the notice would prevent working men from participating in the benefits conferred by the Workmen's Compensation Act.

Artesian Boring Operations.—The Great Northern Railway has recently obtained a remarkably successful result in some artesian boring operations they have had carried out at Werrington, near Peterborough Station, by Messrs. Le Grand and Sutcliff, of London. At a depth of 132ft. a splendid overflowing spring has been struck which rises to the height of 20ft. above surface, and the flow is at the rate of 300,000 gallons per diem, which would suffice to supply a town of over 10,000 inhabitants. This large output of water will doubtless have a useful bearing upon the locomotive supplies of the district, and an interesting feature of the boring is the various geological formations which have had to be passed through, viz., the Oxford clay, cornbrash, great oolite clays and stone, the upper estuarine beds, and finally terminating in the Lincolnshire limestone, from which the supply is derived.

The Borough Polytechnic Institute.—By way of recognising to some extent the services rendered by the chairman, Mr. Edric Bayley, to this institute, and, as a mark of appreciation for his liberal contribution of £2,000. to the building fund, the governing body has decided to call the new range of buildings (*C. T. J.* 602, p. 353), comprising the School of Cookery, the Physics Laboratory, and the Physics Lecture Theatre, by his name, and these schools will accordingly be named "The Edric Bayley Schools."

Personal.– At the Manchester Chamber of Commerce on Wednesday, in accordance with a recent resolution of the board, a handsomely bound and illuminated document recording the sense which the board entertained of the service rendered to British Industry by Mr. Ivan Levinstein, owing to his prosecution of the first successful petition to the Board of Trade for a compulsory licence to work a patent, under section 22 of the Patents, Designs, and Trade Marks Act, was presented to Mr. Levinstein on behalf of the Chamber. Mr. Levinstein briefly thanked the Board for the gift, which he said would be much appreciated.

Manchester Gas Supply and Residuals.—The Gas Committee report that during the past year there has been a large increase in the consumption of gas within the area of supply of the Manchester Corporation. This has been brought about by the increased demand for gas cooking appliances, and to some extent also by the use of prepayment meters. During the last week of November the total consumption reached 129,467,000 cubic feet as compared with 120,262,000 in the corresponding week last year. The Committee has appointed a subcommittee to consider two matters, first, whether the manufacture of residual products will cause any nuisance, and, secondly, can such manufacture be carried on to the financial benefit of the ratepayers? The Committee also had under consideration the desirableness of further purifying the gas manufactured by the Corporation, more particularly with regard to the excessive amount of sulphur it is stated to contain. It was decided to take effective measures to reduce this form of impurity.

Explosion of Safety Matches.—A Claim for Damages — A case of some importance was tried at Westminster County Court on Monday, before His Honour Judge Lumley Smith, Q.C., and a jury. The plaintiff was Mr. J. C. Haynes, a tailor, and he sued the defendant, Mr. Atkins, grocer, of New Bond-street, to recover £50. damages for injuries sustained owing to the explosion of a box of matches. The plaintiff's case was that in August last he sent his servant to the defendant's shop for the purpose of purchasing a packet of matches and put a box in his pocket. The boxes bore on the label the words "Briton perfect safety matches," but upon striking one the whole box exploded and burnt his hands so seriously that he was unable to attend to his business for some considerable time. The defence was that the matches in question were a good merchantable article, and that the ignition of the box must have been caused through negligence. The defendant was called, and said he had never known safety matches to explode, as was the case with the old-fashioned sulphur matches. At this point of the case the jury expressed the opinion that they were satisfied on the evidence that the plaintiff had sued the wrong party, and that there should be judgment for the defendant. His Honor said he must ask the jury to say whether or not the matches in question were reasonably fit for the purpose for which they were intended. After hearing the argument of counsel, the jury found a verdict for the defendant.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are quiet, but comparatively speaking, steady at 8½d. to 9d. Carbolic acids are quiet, and the same may be said of naphthas, though prices generally are maintained satisfactorily. Anthracene is quoted at rather misleading figures, for they are not the standard makes of 30 % A that are being offered at 3¼d. B is quoted 2¾d. to 3d. Pitch is firm at 24/6 f.o.b. East Coast, and 22/- West Coast.

Sulphate of ammonia is steady, and the market fairly active, so that the season's production is practically absorbed as it becomes available. Prices meantime maintain an evenness of tone which is rather surprising. Closing prompt values at all ports may be stated at £9. 18s. 9d. to £10., with the exception of Liverpool where the quotation is £10. to £10. 1s. 3d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is still reported active, more especially for forward deliveries; prices generally are in buyers' favour. In bleaching powder the active competition continues, and business is

reported done for 1899 at £4. to £4. 2s. 6d. f.o.r. makers' works. Caustic soda is similarly discounted on present values to secure forward contracts; nearest spot values, f.o.b. Liverpool are:—77 % £7 12s. 6d., 74 % £7. 7s. 6d., 70 % £6. 17s. 6d., 60 % £5. 17s. 6d. net per ton. Ammonia alkali, 58 %, in strong request and market firm at £4. 2s. 6d. f.o.r. makers' works, and for contracts over 1899 at £3. 17s. 6d. per ton. Bicarbonate and soda crystals are without any change. Chlorate of potash and soda are in abundant supply, and prices are barely firm at 3½d. and 3¾d. per lb. respectively. Sulphate of copper steady at £18. 10s. to £18. 15s. f.o.b. Brown acetate of lime is firm at £5. 7s. 6d. nett; ex-ship Grey, £7. 10s. nett. Acetic acids are unchanged. White sugar of lead quiet at £25., c.i.f.; nitrate of lead in good request at £20. per ton. Borax and boracic acid are firm. There is little inquiry for arsenic for spot, but market firm at £16. to £16. 10s., according to brand. Sulphocyanides dull. Yellow prussiate of potash firm at 6¼d. per lb. Soda, 4⅞. Ammonia salts, generally, are firm. For aniline oil and salt there is a good demand, and prices are well maintained at the recent advance. Carbolic acids are quiet, and values unchanged. Potash, caustic and carbonate, is in good, steady request.

REPORT ON MANURE MATERIAL.

There is a firm market in all branches, and a fair amount of business passing. Quotations for mineral phosphates are unchanged. There is considerable inquiry for high grade rock, but U. K. buyers hesitate to pay the high prices demanded. There is further improvement in the value of bone meal, and £5. 2s. 6d. per ton is now required, ex quay Liverpool, Jan.-February shipment. For East Coast ports probably £5. 1s. 3d. per ton, c. f. & i., would be accepted. Nitrate of soda is steady at 7s. 6d. per cwt. for ordinary and 7s. 7½d. per cwt. for fine quality.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron steady: Scotch warrants closed at 48s. 9½d.; Middlesbrough, — cash; and hematite, 56s. 0½d. Copper quiet: Chili bars, G. O. B.'s and G. M. B.'s, closed at £55. 3s. 9d. to £55. 8s. 9d. cash, and £55. 6s. 3d. to £55. 11s. 3d. three months. Tin dull: Straits closed at £81. 10s. 0d. to £82. 0s. 0d. cash, and £82. 2s. 6d. to £82. 12s. 6d. three months; Australian, £82. 5s. 0d.; English ingots, £84. 10s. to £85. Lead quiet: Spanish, £13. 1s. 3d. English, £13. 5s.; Silesian spelter, ordinary, £24. Nickel, 1s. 2½d. Antimony, £36. 15s. to £37. 5s. Quicksilver: First hands, £7. 15s.; second hands, £7. 14s. *Copper shares* steady: Cape, 4¾ to 5; Copiapo, 2 11/16 to 2 13/16; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅛ to 3¼; Rio Tinto, 30 1/16 to 30 3/16; Tharsis, 7 5/16 to 7 7/16.

GLASGOW, WEDNESDAY.—Market firm, and a good business. Scotch done at 48s. 9d., 48s. 9½d., and 48s 8d. and 48s 10d. cash; buyers, 48s. 9½d. cash; sellers, 48s. 10d. Cleveland idle. Cumberland hematite done at 55s. 11d., 56s. 1d., and 56s. 0½d. cash; also at 56s. 4½d., 56s. 5d., 56s. 2d., and 56s. 4d. month; buyers, 56s. 0½d. cash; sellers, 56s. 1d. Middlesbrough hematite done at 54s. 7½d. to 6th January.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is in fair request, and prices are steady. Soft oils have been done at £19. spot. Market closes quiet but steady. Olive is in better demand, and sales have been more frequent at full prices. Linseed steady with sellers of Liverpool makes in export casks at 17s. 3d. to 18s. 6d. Cottonseed is firm, and holders are steady at 15s. 3d. to 15s. 9d. per cwt. for Liverpool refined. Castor oil is firm and in better demand, especially for spot parcels, which are moving freely at 2⅞d. for good seconds Calcutta; 2¾d. to 2 1/16d. for first pressure French, and Madras 2⅝d. per lb. Tallow is advancing in price, and is very firmly held. Resin is firm, and in fair request on spot for all grades at unabated values. Spirits of turpentine are dearer, the further improvement upon last week having brought the price to 30s. per cwt., at which spot sales have been made. Petroleum steady, with American 6⅜d. to 8d., and Russian refined 6d. per gallon.

CAKES.—Owing to a lack of demand for all descriptions of linseed imported on this market, the market rules very quiet, and prices are easier, American Western now being quoted at £6. 16s. 3d. to £7. 1s. 3d. River Plate at £7. 3s. 9d. to £7. 5s., usual terms, Bombay at £7. 2s. 6d. to £7. 5s, also usual terms, and Russian at £7. 7s. 6d. to £7. 10s., nett cash. Liverpool makes are not so much inquired after as of late, but holders remain quite steady in their requirements, and previous values are repeated at £7. 17s. 6d. to £8. 15s. per ton, according to brand. Good to choice brands of American decorticated cottonseed are still in good request, and sellers maintain late quotations, £5. 15s. to £6. being still asked, according to quality, with moderate sales making in Liverpool makes at previous currencies, viz., £6. 7s. 6d. to £6. 15s. per ton, according to brand. Undecorticated Liverpool makes are in very fair demand, and the quotation is partially raised 2s. 6d., with £4. 5s. to £4. 15s., according to brand, being now quoted, and Egyptian is also firmer, with supplies of prime on the spot rather restricted, and sellers are now asking £4. 5s. per ton, there being a fair inquiry.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.;

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Trade here, taken generally, may be described as good, but the situation amongst the shipping comes dangerously near a strike, which all trust may pass away without once more jeopardising the trade of the port again. It transpired the other day that the average output of flour from the mills here reached 20,000 sacks per week which shortly will be augmented by another large mill in course of construction. The imports to date as against the same period a year ago have been: Wheat, 2,496,682 qrs. against 2,207,167 qrs.; flour, 268,855 cwts. against 363,021 cwts., which is more satisfactory than the seed-crushers return. Linseed, 472,902 qrs. against 698,607 qrs. Cake, 14,367 tons against 10,564 tons, the greater portion of which arrived whilst the mills here were standing. Cottonseed, 186,638 tons against 192,676 tons. Olive oil, 5,879 tuns against 4,292 tuns. Linseed oil is practically unchanged, being quoted 15s. 3d. sellers; January to August same quotation. Boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oil has improved upon the week about 7s. 6d. per ton, and quoted 12s. 10½d., and same to April at which there are sellers; casks, £1., and barrels, £1. 10s. per ton extra. Spirits of turpentine firm and unchanged. Castor oil, extracted here, pure pharmaceutical, cold drawn, 29s. per cwt. in barrels, 3¼d. per lb. in cases; firsts, 27s. in barrels; seconds, 26s in barrels. Oleines £17. to £19 per ton. Resins firm, 5s. to 9s., according to grade. Cod oil, £16. to £18. per ton. Olive oil, £32. to £33. 10s. per tun. Olive oil soap, £16. to £18. per ton.

CAKES.—The demand is good and the mills are well employed. Linseed cakes steady, 95% pure, £8. to £8. 5s. per ton; oil-cakes (linseed), £7. 2s. 6d. to £7. 5s. Russians, £7. 10s. to £7. 12s. 6d. per ton. Cottoncakes, a firmer feeling with steady demand; best makes, £4. 7s. 6d. to £4. 10s.; seconds, £4. 5s. to £4. 7s. 6d.; decorticated, £6. 7s. 6d. to £6. 10s. Rape cakes, Black Sea, £4. 2s. 6d. East India, £5. 7s. 6d. to £5. 10s. per ton.

PAINTS.—Makers are fairly well employed, but until the turn of the year the home market buys from "hand to mouth." Prices unchanged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The market, not at all bright before, is gradually becoming still less so, under the force of various influences. Over sea shipments are getting down to the winter minimum, and already the slowing down tendencies of the approaching holidays begin to be felt. In general chemicals there are hardly any changes, but caustic soda is quoted rather easier. Sulphate of ammonia for a fortnight has been steady to a degree that is rarely experienced in the course of this article, which, as a rule, tends to change every day almost. It is still in the close neighbourhood of £10. f.o.b. Leith. Probably it is to be had at a fraction lower, but at least some of the makers refuse to deal at less. Mineral oils, solid paraffins, and paraffin spirit are all in fairly good keeping. Deliveries of burning oils, ex contracts, are now in large volume.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. 0d.; borax, English refined, £14. 5s, and boracic acid, £25. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool

nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10 prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port; sulphate of copper, £18. 5s. od. to £18. 10s. od. less 5% Liverpool; paraffin scale, hard, 1½d. to 1⅝d. per lb., and soft 1⅝d. per lb.; paraffin wax, 120° semi-refined, 1⅞d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6 10s. Week's imports of sugar at Greenock were 11,000 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are still quiet and show no alteration in prices. Sulphur is scarce at £4. 15s. per ton. Soda crystals £2. 12s. 6d. per ton, gross weight, locally, and caustic, 70% £7. per ton; 76/77% £7. 15s. to £8. per ton.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The coal trade continues steady, and there is still a good demand for best steam and gas qualities. Bunker coals are also firm. Coke is firm with a good demand locally. Best Northumbrian steam, 9s. 3d. to 9s. 6d. per ton; second qualities, 8s. 3d. to 8s 6d. per ton; small steam, 5s. to 5s. 3d. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s per ton; coke, 18s to 20s. per ton

New Companies.

Doulton & Co., Ltd.—CAPITAL £750,000., in £1. shares (350,000 5 per cent. cum. pref.). This company has been formed to acquire the business carried on by H. L. Doulton, as Doulton & Co., at Lambeth Pottery, London, at Rowley Regis and Burslem, Staffs., at St. Helens, Lancs., at Smethwick, near Birmingham, at Paisley, and Paris, with depôts in Liverpool, Manchester, Birmingham, and Glasgow, to adopt an agreement with H. L. Doulton, and to manufacture and deal in Doulton ware, Lambeth-Faience, stone-ware, earthenware, china, pottery, etc. The subscribers to the memorandum of association are:—H. L. Doulton, High-street, Lambeth, potter; R. O. Doulton, High-street, Lambeth, potter; B. Hannen, 4, Pembridge-place, W., gentleman; W. A. Turnbull, J.P., Oaklands, Hildenbro', Tonbridge; Mrs J. M. Doulton, Bowling Green House, Putney Heath; Mrs. S. L. Hooper, The Knoll, Putney; Miss K. D. Doulton, 38, Hyde Park Gate, S.W.

H. and T. Proctor, Ltd.—CAPITAL £10,000., in £1. shares. This company has been formed to acquire the business carried on at Temple Gate, Bristol, as "H. & T. Proctor," and to carry on the business of artificial manure manufacturers, bone boilers, chemical manufacturers, chemists, farmers, seed merchants, etc. The number of directors is not to be more than five; the first are F. Norrington, E. A. Hingston, and W. Proctor; qualification, £500.

J. Storr & Co., Ltd.—CAPITAL £15,000., in £1. shares. This company has been formed to carry on the business of chemists, druggists, drysalters, oil and colourmen, etc. The subscribers to the memorandum of association are:—J. I. Smith, 24, Finsbury Circus, E.C., gentleman; J. H. Smith, 24, Finsbury Circus, E.C., solicitor; C. L. Piesse, 54, Belsize Park, N.W., gentleman; C. E. H. Smith, 24, Finsbury Circus, E.C., solicitor; S. S. Smith, 54, Belsize Park, N.W., articled pupil; P. E. Brown, 24, Finsbury Circus, E.C., solicitor; C. Seadon, 92, Balfour-road, Ilford, surveyor.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

A. CASWELL, W. DEALTREE, and A. T. MCDONALD, blacking manufacturers, College-place, Chelsea, S.W., under the style of Caswell, Dealtree, & Co.

E. H. SWETE and R. St. G. ROSS, analytical and consulting chemists, Worcester, under the style of Swete & Ross.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 3rd.

Acetate of Lime—

U. States,	2,571 bgs.	H. Wallace & Co.

Acetic Acid—

Germany,	51 pks.	Phillipps & Graves
Holland,	17	H. Lorenz
,,	350	R. W. Greeff & Co.
,,	72	A. & M. Zimmermann

Acetone—

Germany,	10 dms.	D. T. Domeier & Co.
,,	£25	L. & I. D. Jt. Co.

Acids—

Holland,	10 pks.	Little & Johnston

Ammonium Chloride—

Holland,	£38	H. Lorenz

Asbestos—

Germany,	£130	Deering & Robottom
N. Russia,	650	R. T. Hopper & Co.
U. States,	70	J. D. Hewitt & Co.
,,	350	Deering & Robottom

Barium Chloride—

Germany	£30	Petri Bros

Barytes—

Belgium,	36 pks.	J. L. Lyon & Co.
Holland,	23	J. Graves
,,	162	W. Harrison & Co

Bleaching Powder—

France,	53 cks.	J. M. Steel & Co.

Bone Meal—

E. Indies,	100 t.	T. T. Creed
,,	200	Fox, Roy & Co.
Russia,	50	D. de Pass & Co.

Bones—

Sydney,	5 t.	Goad, Rigg & Co.

Bromine—

Germany,	5 pks.	Droleuvaux & Bremner

Caoutchouc—

Zanzibar,	15 c.	L. & I. D. Jt. Co.
Niger,	57	,,
Madagascar,	10	W. M. Smith & Sons
Straits,	432	Gilman Brs & Co.
Germany,	13	Butler's Wf., Ld.
Madagascar,	90	Procter Brs.
B. W. I.,	2	L. & I. D. Jt. Co.
B. Guiana,	330	Jackson & Till
Madagascar,	38	Kleinwort, Sons & Co.
,,	18	Wainwright Brs. & Co.
Straits,	119	E. Boustead & Co.

Castor Oil—

E. Indies,	100 cs.	R. G. Hall & Co.
,,	30	Anderson, Weber & Smith
France,	53 pks.	F. Bochin
,,	56 brls.	Mordaunt Bros.

Caustic Potash—

Germany,	40 dms.	J. M. Steel & Co.
France,	30	Petri Brs.
,,	32	F. W. Berk & Co., Ld.

Chemicals (*otherwise undescribed*)

Germany,	£60	H. Lambert
,,	125	L. & I. D. Jt. Co.
Belgium,	1,000	T. H. Lee
,,	16	John Cockerill Line
Holland,	220	E. E. Burles
Germany,	96	Craven & Co.
,,	7	Butler's Wf., Ld.
Belgium,	24	Faust & Co.
U. States,	512	S. C. Jones
Germany,	8	T. H. Lee
,,	12	W. J. W. Childs
,,	675	A. & M. Zimmermann
,,	690	R. W. Greeff & Co.
France,	60	B. & F. Wf. Co., Ld.
Holland,	5	J. Barber & Co.
Germany,	7	Brit. Anti-Foulg. Co. & Paint Co., Ld.
Holland,	12	T. H. Lee
Germany,	24	Butler's Wf., Ld.

Cream of Tartar—

Spain,	20 pks.	W. C. Bacon & Co.
,,	2	B. & F. Wf. Co., Ld.
France,	10	,,
,,	10	F. C. Devon & Co.
U. States,	10	B. & F. Wf. Co. Ld.

Cryolite—

Denmark,	£38	Tegner, Price & Co.

Disinfectants—

Germany,	£40	A. & M. Zimmermann
Holland,	40	A. C. Lloyd

Dyestuffs—

Aniline

Germany,	10 pks.	R. W. Greeff & Co.

Annatto

France,	3 pks.	C. Faust & Co.

Argols

Spain,	425 pks.	J. Owen
Italy,	405	B. Jacob & Sons

Cochineal

Canaries,	63 pks.	W. M. Smith & Sons
,,	17	L. & I. D. Jt. Co.
,,	9	Price, Hickman & Co.
,,	3	Hendry Martin

Extracts

U. States,	4 pks.	Lloyd & Co.
France,	25	Union L. Co., Ld
Belgium,	10	Leach & Co.
France,	32	Beresford & Co.
U. States,	25	Barnes & Co.

Indigo

Nicaragua	10 pks.	W. J. & H. Thompson
E. Indies,	5 chts.	Van Glehn & Sons

Myrabolams

E. Indies,	14 pks.	Hale & Son

Saffron

Spain,	1 pk.	Richardson, Spence & Co.

Shumac

Italy,	300 pks.	J. E. Scott
,,	150	H. K. Daniels
,,	500	C. S. Lovell
,,	50	Whittard, Crisp & Co.

Tanners' Bark

Natal,	55 t.	J. T. Rennie, Son & Co.
Cape	22	A. & W. Nesbitt
N. Zealand,	13	G. & H. Penney
Queensland,	25	J. R. Francis & Co.
Adelaide,	7	J. E. Scott

Valonia

A. Turkey,	25 t.	Anning & Cobb

Farina—

France,	50 pks.	H. Ewald & Co.
Germany,	100	Seaward Brs., Ld.
U. States,	50	R. & W. Davidson
Germany,	3	Craven & Co.
France,	4	Mory & Co.
Holland,	100	G. Hornner

Glucose—

France,	332 pks.	372 c.	L. Normia & Co.
U. States,	650	1,325	L. & I. D. Jt. Co.
,,	50	310	L. & T. L. C. & D Co.
Canada,	510	510	L. & I. D. Jt. Co.
Germany,	100	100	J. Frank & Ohlmann

Glue—

U. States,	£25	Armour & Co.
Belgium,	1,000	J. Barber & Co.
Holland,	16	Phillipps & Graves
Germany,	148	Butler's Wf., Ld.
Belgium,	120	J. E. Kitton
France,	50	Prop. Hay's Wf.
,,	12	Bennett S. S. Co.

Germany, 20 H. Lambe t
" 18 M. Dk. Co
Holland, 42 T. H. Lee
France, 56 Mory & Co.
" 100 B. & F. Wf. Co., Ld.
U. States, 20 L. & I. D. Jt. Co
Germany, 188 "
" 25 Argo S. S. Co.
Austria, 120 J. Greig
Belgium, 21 Leach & Co

Glue Stock—
E. Indies, 30 bls. Scriven Bros. & Co.
Germany, 12 Hicks, Nash, & Co.
Sydney, 22 Anning & Cobb
" 62 Goad, Rigg & Co.
E. Indies, 108 J. Allen & Co.
Germany, 5 H. Lambert
" 8 L. & I. D. Jt. Co.
Belgium, 40 Leach & Co.
" 10 Hicks, Nash & Co.

Glycerine—
Germany, £80 R. W. Greeff & Co.

Iron Oxide—
U. States, 5 pks. O'Hara & Hoar

Lead Acetate—
Germany, £109 F. Bochin

Litharge—
Germany, 53 pks. Spies Brs. & Co.

Manganese Ore—
Germany 10 t. Craven & Co.

Methyl Alcohol—
U. States, 24 dms. Wallace & Co.
Belgium, 1 Jones & Co.
Spain, 4 Lister & Biggs
Germany, 8 Tingle, Jacobs, & Co.
France, 20 cks. E. Catlin

Molasses—
U. States, 100 cks. 540 c. M. Dk. Co.
" 500 3,090 J. Forsey
" 850 4,540 J. W. Cook & Co., Ld.
" 125 660 Deering & Robottom
" 350 2,161 Lunham & Moore

Ochre—
Spain, 50 pks. W. Spence & Co., Ld.
Holland, 5 Phillipps & Graves
France, 26 Beck & Pollitzer
U. States, 56 Taylor Brs.

Paraffin Wax—
U. States, 300 brls. H. Hill & Sons

Phosphates—
Belgium, 130 t. Anglo-Contl. Guano Works
Dutch W. I., 395 G. M. Bauer
France, 245 West & Penrose

Pitch—
France, 26 cks. Poth, Hille, & Co.
Germany, 132 Linck, Moeller, & Co.
N. Russia, 30 brls. Abbey, Abbey, & Co.

Plumbago—
Ceylon, 60 brls. Marshall & French
" 18 R. G. Hall & Co.
" 66 French & Plucknett
" 18 Beresford & Co.

Potash—
Germany, £18 R. W. Greeff & Co.
" 40 kgs. "

Potassium Carbonate—
Holland, 1,030 c. J. Owen
Germany, 400 Charles & Fox
" 192 Petri Brs.
France, 60 "
U. States, 120 S. Ward & Co.

Potassium Chloride—
Germany, 700 bgs. F. W. Berk & Co., Ld.

Potassium Oxychloride—
Sweden, 8 brls. G. Boor & Co.

Potassium Sulphate—
Germany, 200 bgs. F. W. Berk & Co., Ld.
" 508 Bessler, Waechter, & Co.
" 508 D. de Pass & Co.

Pyrites—
Spain, 700 t. Anderson, Anderson, & Co.

Rosin—
France, 5 cks. J. Wilson
" 13 C. W. Schmidt
Holland, 5 brls. J. Owen
Carabelli, 126 J. Knight & Sons

Rosin Oil—
France, 250 brls. C. Price & Co.

Salicylic Acid—
Germany, 10 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 40 cks. J. Hall & Son
" 206 P. Hecker & Co.
" 16 L. & I. D. Jt. Co.
E. Indies, 1,144 bgs. Perkins & Homer

Soap—
Belgium, £160 T. H. Lee
France, 26 City Coml. Wf., Ld.
" 80 Skilbeck Brs.
Holland, 61 Phillipps & Graves
U. States, 260 E. Fellingham

Soda Ash—
Belgium, 1,056 c. R. Waters

Sodium Bichromate—
Germany, 52 cks. A. E. Neale

Sodium Hyposulphite—
Holland, 420 c. R. W. Greeff & Co.

Sodium Sulphate—
Germany, £23 H. Wallace & Co.

Starch—
Holland, 72 pks. Phillipps & Graves
" 1,530 Little & Johnston
Belgium, 440 T. Ronaldson & Co.
" 554 F. Claydon & Co.
" 78 Leach & Co.
" 161 T. H. Lee
Germany, 6 Butler's Wf., Ld.
" 20 Phillipps & Graves
" 2,020 Horne & Co.
France, 200 J. Barber & Co.
" 22 W. E. Cole
U. States, 2,000 Union Ltge. Co., Ld.

Stearine—
France, 61 sks. Beresford & Co.
Belgium, 2 cks. T. H. Lee

Sulphur—
Italy, 88 t. G. Boor & Co.
" 12 Grimwade, Ridley, & Co.
" 10 W. Balchin, Ld.
" 9 F. C. Devon & Co.
" 25 A. Zumbeck & Co.
" 10 J. Puddy & Co.

Sulphuric Acid—
Germany, 1 pk. Drolenvaux & Bremner

Talc—
E. Indies, £215 W. M. Smith & Sons
Canada, 210 L. & I. D. Jt. Co.
Norway, 5 M. Dk. Co.
U. States, 70 W. Dixon

Tannin—
Germany, £80 R. W. Greeff & Co.

Tar—
N. Russia, 46 brls. F. & S. Chiesman & Co.
" 46 Union L. Co., Ld.

Tartaric Acid—
Holland, 41 pks. B. & F. Wf. Co., Ld.
" 8 R. W. Greeff & Co.
" 16 Kirkpatrick, Barr, & Co.
Belgium, 8 F. C. Devon & Co.
" 8 J. Harrison

Turpentine—
Russia, 52 brls. D. Smith

Ultramarine—
Germany, 28 pks. Steinhoff, Sons, & Co.
" 12 Taylor Brs.
Holland, 5 Hernu, Peron, & Co.
" 1 J. Barber & Co.

Varnish—
U. States, 5 pks. L. & I. D. Jt. Co.
" 76 J. R. Francis & Co.
France, 7 Mory & Co.

White Lead—
Holland, 49 pks A. & M. Zimmermann
" 162 Perkins & Homer
Belgium, 71 J. L. Lyon & Co.
" 23 J. R. Francis & Co.
" 75 T. & W. Farmiloe, Ld.
Germany, 86 R. W. Greeff & Co.
" 8 J. Barber & Co.
" 12 H. Lambert

Wolfram Ore—
Sydney, 2 t. L. & I. D. Jt. Co.

Wood Pulp—
Holland, 26 pks. Phillipps & Graves
" 2,126 P. Heydemann
Sweden, 180 Christophersen, Andrews, & Co.
" 7,030 Henderson, Craig, & Co.
Norway, 1,160 Christophersen, Andrews, & Co.
" 250 W. E. Bott & Co.
" 1,600 J. Sharp
" 200 Becker & Co.
" 1,851 Johnsen & Jorgensen
Germany, 95 C. S. Lovell
" 510 E. J. & W. Goldsmith
Canada, 407 A. E. Reed & Co.

Zinc Oxide—
Germany, 116 pks. Spies Brs. & Co.
" 10 Prprs. Dowgate Dk.
" 1,000 Soundy & Sons
" 110 M. Ashby, Ld.
Holland, 25 "
" 100 Hubbuck & Co.

LIVERPOOL.

Week ending December 1st.

Barytes—
Rotterdam, 100 bgs.

Bones—
Valparaiso, 103 sks.
Alexandria, 150 bgs.

Borate of Lime—
Valparaiso, 2,121 sks. Hainsworth Watson

Borax—
Mollendo, 3,124 sks.

Caoutchouc—
St. Nazaire, 2 cs.

Castor Oil—
Marseilles, 89 brls. 20 cs.

Cottonseed Oil—
New York, 25 brls.
Ch'Pstown, S.C., 500

Cream of Tartar—
Bordeaux, 22 cks.
St. Nazaire, 1

Dyestuffs—
Extracts
New York, 100 brls. McArthur & Co.
Ghent, 29 cks.
Marseilles, 100
Fustic
Kingston, 1,269 pcs. Gillespie Brs
" 375
Madder
Rotterdam, 1 ck.
Valonia
Smyrna, 2,015 qtls. G. Essayan & Co.
" 149 bgs.

Glue—
St. Nazaire, 23 cks. 20 cs.
Marseilles, 2
Rotterdam, { 7 / 100 bgs.

Glycerine—
Bordeaux, 10 cks.

Guano—
Valparaiso, 11 sks. 1 cs. Peruvian Corpn.

Lime—
New York, 711 bgs. J. W. Coulston & Co.

Lithopone—
Hamburg, 50 cks.
Rotterdam, 40

Manganese—
Valparaiso, 20 bgs. Balfour Williamson

Manganese Ore—
Poti, 1,850 t. (abt.)
Coquimbo, 1,000 Balfour Williamson

Ochre—
Boston, 1 ck. 1 brl. Pearson B. Kelly
Marseilles 20 cks.

Paint—
Boston, 20 cs.
New York, 2 Harland & Wolff

Paraffin Scale—
New York, 182 brls. Thompson & Bedford
Baltimore, 100

Phosphates—
Brunswick, 1,513 t.
Pt. Royal, S.C., 1,500

Rosin—
Savannah, 6,020 brls.
Ch'Pstown, S.C. 180

Saltpetre—
Hamburg, { 4 cks. / 10 kgs.

Soap—
New York, 11 cs.
Boston, 5 brls.
Marseilles, 8 J. H. Nicholson
" 67
New York, 11 Boots Pine Drug Co.
" 100 bxs. H. A. Lang & Co.

Soap Lye—
Marseilles, 44 cks. 10 dms.

Soapstone—
Bordeaux, 160 bgs. Geo. G. Blackwell, Sons & Co.

Starch—
Baltimore, 250 bgs.
New York, 10 brls. J. Armstrong & Co.

Stearine—
New York, 5 hhds.
Rotterdam, 27 bgs.

Tallow—
Montreal, 131 brls. T. Nickels & Co.
" 236 tcs.

Tartaric Acid—
Rotterdam, 10 cks.

Turpentine—
Constantinople, 1 cs.

Ultramarine—
Hamburg, 8 cks.

Varnish—
Rotterdam, 3 cks.

Waste Salt—
Hamburg, 6,520 bgs.

White Lead—
Rotterdam, 69 cks.

Wood Pulp—
Gothenburg, 8 bls. G. F. Green & Co.
" 7 R. L. Lundgren
Rotterdam, 306 bls. 214 pks.

MANCHESTER.

Week ending December 3rd.

Annatto—
Bordeaux, 7 cks.

Barytes—
Antwerp, 120 bgs.

Chemicals (*otherwise undescribed*)
Antwerp, 7 brls. J. T. Fletcher & Co.
Hamburg, 30 dms.

Colours—
Antwerp, 2 brls. 5 cs. 36 pks.

Extracts—
New York, 105 brls.

Farina—
Hamburg, 1,199 bgs.

Gelatine—
Antwerp, 10 cs.
Hamburg, 1

Glue—
New York, 10 brls.

Limestone—
Antwerp, 3 cs. J. T. Fletcher & Co.
" 17
Ghent, 2

Mineral White—
Bordeaux, 100 bgs. G. G. Blackwell, Sons, & Co.
" 109

Paraffin Scale—
New York, 370 brls.

Potash—
Hamburg, 10 cks.

Shumac—
Bordeaux, 6 bls.

Soap—
New York, 300 bxs.

Soap Lye—
Nantes, 10 cks. J. & P. Hutchison

Sodium Stannate—
Hamburg, 1 ck.

Starch—
Antwerp, 500 cs.

Stearine—
Antwerp, 25 bgs.

Tartar Emetic—
Hamburg, 9 cks.

Wood Pulp—
Hamburg, 1,040 pks.
Helsingfors, 1,062 bls.

Zinc Carbonate—
Hamburg, 4 cks.

Zinc Oxide— Hamburg, 10 cks. New York, 220 brls.

HULL.

Week ending December 3rd.

Acetic Acid— Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Asbestos— Rotterdam, 1 cs. Hull & Netherlands S. S. Co.

Barytes— Amsterdam, 19 cks. Hull & Netherlands S. S. Co. Antwerp, 73 Bailey & Le tham, Ld Rotterdam, 86 Hull & Netherlands S. S. Co.

Chalk— Hamburg, 50 cks. Wilson, Sons, & Co., Ld.

Chemicals (*otherwise undescribed*) Antwerp, 97 pks. Wilson, Sons, & Co., Ld. Christiania, 10 cks. " Ghent, 40 pks. " Hamburg, 3 cks. "

Colours— Antwerp, 31 pks. 6 cs. Wilson, Sons, & Co., Ld Ghent, 5 pks. " Rotterdam, 163 28 cs. 14 brls. 64 cks. Hull & Netherlands S. S. Co.

Cottonseed Oil— New York, 373 brls. Wilson, Sons, & Co., Ld.

Cream of Tartar— Bordeaux, 5 cks.

Creosote Salts— Rotterdam, 1 ck. Hull & Netherlands S. S. Co.

Cryolite— Copenhagen, 1 ck Wilson, Sons & Co., Ld.

Dyestuffs— **Alizarine** Rotterdam, 50 brls. Hull & Netherlands S. S. Co

Aniline Colours Amsterdam, 20 cks. Hull & Netherlands S. S. Co.

Shumac Palermo, 2,708 bgs. Wilson, Sons, & Co., Ld. " Trieste, 30 " 150 **Valonia** Trieste, 100 bgs Wilson, Sons, & Co., Ld.

Dyestuffs (*otherwise unues.*)— Hamburg, 93 bgs. Wilson, Sons, & Co., Ld.

Farina— Hamburg, 100 bgs. Wilson, Sons & Co. Ld. Harlingen, 200 bls Hull & Netherlands S. S. Co.

Glue Stock— Hamburg, 4 bls. Wilson, Sons, & Co., Ld.

Lime— New York, 276 bgs. Wilson, Sons, & Co., Ld.

Litharge— Rotterdam, 16 cks. Hull & Netherlands S. S. Co.

Lithopone White— Amsterdam, 12 cks. Hull & Netherlands S. S. Co.

Paint— Hamburg, 1 cs. Wilson, Sons, & Co., Ld.

Paraffin Wax— New York, 50 cs.

Phosphates— Ghent, 200 t.

Potash— Dunkirk, 34 cks. 40 dms. Wilson, Sons, & Co., Ld. Hamburg, 18 Bailey & Leetham, Ld.

Pumice Stone— *Messina*, 279 pks. Wilson, Sons, & Co., Ld. " 5 cs.

Saltpetre— Antwerp, 135 bgs. Wilson, Sons, & Co., Ld. Hamburg, 10 kgs. 4 cks. "

Soap— Bari, 20 cs. Wilson, Sons, & Co., Ld. " Molfetta, 5 200 bxs. " New York, 300

Soda— Antwerp, 100 bgs. Wilson, Sons, & Co., Ld. Ghent, 52 "

Starch— Amsterdam, 60 bgs. 78 cs. Hull & Netherlands S. S. Co. Antwerp, 40 Bailey & Leetham, Ld. Bremen, 718 Veltmann & Co. Ghent, 141 Wilson, Sons, & Co., Ld. New York, 600 bgs. Rotterdam, 42 cs Hull & Netherlands S. S. Co.

Sulphur— Catania, 616 pks. Wilson, Sons, & Co., Ld. " 50 t. " 600 bgs.

Tallow— Dunkirk, 279 cks. Wilson, Sons, & Co., Ld. New York, 150 tcs. " 92 brls.

Tar— " Stockholm, 10 cks. Wilson, Sons, & Co., Ld.

Tartaric Acid— Rotterdam, 21 cks. Hull & Netherlands S. S. Co

Ultramarine— Bremen, 2 cks Veltmann & Co. " 12

Waste Salt— Hamburg, 200 bgs.

White Lead— Amsterdam, 34 cks. Hull & Netherlands S. S. Co. Antwerp, 13 Bailey & Leetham Ld. Ghent, 14 brls Wilson, Sons, & Co., Ld. Rotterdam, 65 cks. Hull & Netherlands S. S. Co.

Wolfram (Metal)— Hamburg, 10 cs. Wilson, Sons, & Co., Ld.

Wood Pulp— Stettin, 200 pks. Wilson, Sons, & Co., Ld.

Zinc Ashes— Stockholm, 35 pks. Wilson, Sons, & Co., Ld.

Zinc Oxide— Antwerp, 50 cks Bailey & Leetham, Ld.

Zinc White— Antwerp, 9 cks. Bailey & Leetham, Ld. Rotterdam, 12 Hull & Netherlands S. S. Co.

GLASGOW.

Week ending December 8th.

Acetate of Lime— Philadelphia, 224 bgs.

Acetic Acid— Rotterdam, 8 cks. J. Rankine & Son

Ammonium Chloride— Rotterdam, 4 cks. J. Rankine & Son

Arachide Oil— Rotterdam, 2 cks. J. Rankine & Son

Barium Chloride— Rotterdam, 4 cks. J. Rankine & Son

Barium Sulphate— Antwerp, 1,201 bgs.

Barytes— Rotterdam, 134 cks. J. Rankine & Son Hamburg, 14

Bitumen— Marseilles, 12 cks.

Bleaching Powder— Rotterdam, 85 cks. J. Rankine & Son

Castor Oil— Marseilles, 93 cks. 23 cs. Antwerp, 152

Chrome Ore— Gothenburg, 20 bxs.

Colours— Rotterdam, 4 bxs. 54 pks. 44 brls. J. Rankine & Son

Dyestuffs— **Alizarine** Rotterdam, 30 brls. 11 cks. J. Rankine & Son

Aniline Rotterdam 8 cs. J. Rankine & Son

Aniline Colours Amsterdam, 1 cs.

Extracts Marseilles, 200 cks. Hamburg, 40 bgs.

Logwood Pt. Liberty, 475 t.

Shumac Palermo, 400 bgs.

Glucose— Baltimore, 150 brls. Boston, 450

Glue— Rotterdam, 51 bgs. J. Rankine & Son Antwerp, 3 cks.

Glue Stock— Philadelphia, 2 brl.

Painters' Colours— Antwerp, 2 cks.

Potash— Hamburg, 12 cks. 60 dms. Rotterdam, 13 cks. J. Rankine & Son

Potassium Oxalate— Rotterdam, 10 cks. J. Rankine & Son

Pumice Stone— Bordeaux, 6 cs. Messina, 40

Saltpetre— Hamburg, 40 cks. 10 kgs.

Soap Lye— Marseilles, 50 dms.

Soda— Rotterdam, 19 cks. J. Rankine & Son

Starch— Rotterdam, 100 cs. J. Rankine & Son Baltimore, 120 bgs. Philadelphia, 1,100 Antwerp, 71

Stearine— Boston, 50 trcs. Antwerp, 7 bgs. Amsterdam, 99

Tallow— Philadelphia, 4 tcs.

Tartar— Bordeaux, 14 cks.

Varnish— Antwerp, 8 cks.

Waste Salt— Hamburg, 1,416 bgs. 112,535 kilos.

White Lead— Hamburg, 20 cks.

Wood Pulp— Gothenburg, 217 bls. 203 pks. Oporto, 1,042 Boston, 34 bdls.

Zinc Oxide— Rotterdam, 25 cks. J. Rankine & Son

Zinc White— Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending December 3rd.

Alizarine— Rotterdam, 1 brl. Tyne S. S. Co

Aniline Colours— Rotterdam, 1 brl. Tyne S. S. Co.

Barytes— Rotterdam, 400 bgs. Tyne S. S. Co.

Calcium Carbide— Antwerp, 14 cs. Tyne S. S. Co.

Colours— Antwerp, 1 ck. Tyne S. S. Co.

Limestone— Antwerp, 3 crts. Tyne S. S. Co.

Pyrites— Huelva, 3,305 t. Tharsis Sulphur & Copper Co.

Starch— Antwerp, 100 cs. Tyne S. S. Co. Rotterdam, 50 "

Wood Pulp— Gothenburg, 20 pks. Rotterdam, 50 bls. Tyne S. S. Co.

Zinc Oxide— Antwerp, 10 brls. Tyne S. S. Co. Rotterdam, 20 cks. "

GOOLE.

Week ending November 30th.

Alizarine— Rotterdam, 139 cks. 9 cs.

Aniline— Hamburg, 25 cks. 2 cs. Rotterdam, 298 85

Antimony— Boulogne, 2 cks.

Chemicals (*otherwise undescribed*) Hamburg, 1 ck. 6 cs.

Dyestuffs (*otherwise undes.*)— Amsterdam, 4 cs. Antwerp, 363 bgs. Boulogne, 30 cks. 218 pks. Hamburg, 1

Farina— Delfszyhl, 300 bgs. Hamburg, 1,488

Glucose— Calais, 200 bgs.

Glue— Antwerp, 5 cks. Boulogne, 4 5 bs. Hamburg, 20 Rotterdam, 47 bgs.

Limestone— Antwerp, 7 crts.

Plumbago— Boulogne, 1 ck.

Potash— Antwerp, 1 cs. Dunkirk, 62 cks. 70 dms

Potassium Carbonate— Hamburg, 39 cks.

Saltpetre— Antwerp, 85 bgs. Hamburg, 8 cks. Rotterdam, 70 bgs.

Sodium Nitrate— Dunkirk, 377 bgs.

Sodium Silicate— Rotterdam, 2 cks.

Starch— Ghent, 36 bxs.

Stearine— Antwerp, 25 bgs.

Ultramarine— Hamburg, 34 cks. 1 cs.

Waste Salt— Hamburg, 500 bgs.

GRIMSBY

Week ending December

Barytes— Rotterdam, 200 bgs.

Caoutchouc— Hamburg, 6 cs.

Chemicals (*otherwise und*) Hamburg,

Colours— Antwerp, 5 cs Hamburg, 11 cks. 12 Rotterdam, 12

Indigo— Hamburg, 6 cs. Rotterdam, 10

Pitch— Antwerp, 54 cks.

Plumbago— Rotterdam, 2 cks.

Soap— Rotterdam, 130 c

Varnish— Antwerp, 4 cks.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 7th.

Acids—
Shanghai, 8 cs. £13
Singapore, 2 16

Alum—
Mogador, 10 c. £55

Ammonia—
Townsville, 8 c. £45
Delagoa Bay, 10 cs. 13
Calcutta, 8 13
Cologne, 15 dms. 77
Melbourne, 20 39
Shanghai, 9 11
Pt. Elizabeth, 10 15

Ammonium Carbonate—
Paris, 2 t. 17 c. £75
Rouen, 5 12 135
Melbourne, 20 cs. 28

Ammonium Chloride—
Melbourne, 1 t. 6 c. £23
Constantinople, 5 145

Ammonium Sulphate—
Ostend, 200 t. 1 c. £1,950
Martinique, 60 1 621
Guernsey, 1 12
Dunkirk, 20 189
Demerara, 102 7 1,012
Surinam, 10 1 104

Bleaching Powder—
Durban, 2 t. £18
Cape Town, 12 c 14

Borax—
Antwerp, 1 t. £15
Townsville, 2 2 c. 32

Calcium Chloride—
Christchurch, 103 t. 8 c. £253

Calcium Phosphide—
Sydney, 2 cs. £23

Carbonic Acid Gas—
Cape Town, 1 t. 1 c. £40
Las Palmas, 15 30

Caustic Soda—
Philadelphia, 67 t. £400
Wellington, 5 4 c. 37
Aden, 8 11
Vera Cruz, 4 7 33
Terceira, 8 6 61
Durban, 1 3 27
Dunedin, 1 8 27
Singapore, 14 12
Malta, 1 8 12
Canterbury, 14 31

Chemicals (*otherwise undescribed*)
Durban, 3 cs. £19
Melbourne, 113 pks (pt.) 1 58 pks. 255
Cape Town, 6 7 43
Pt. Elizabeth, 2 18
Amsterdam, 5 kgs. / 15 cks. 50
Kobe, 45 215
Frankfort, 20 77
Canterbury, 9 27
Madras, 8 28
Adelaide, 8 16
Otago, 12 58
Auckland, 32 pks. (pt.) 2 127
Dunedin, 202 39
Sydney, 5 19 155
Lisbon, 4 34
Calcutta, 4 cks. 89 570
Bombay, 7 17
Sourabaya, 4 20
Karachi, 110 130
Paris, 19 43
Gothenburg, 30 26
Perth, 53 48
Boulogne, 2 20
Hamburg, 7 kgs. 10 21 32 dms. 313

Citric Acid—
Melbourne, 10 c. £63
Rotterdam, 2 kgs. 13
New Plymouth, 2 13
Hamburg, 2 cks. 60
Pt. Elizabeth, 5 33
Reval, 1 t. 116
Lisbon, 5 29
Amsterdam, 10 60
Bombay, 9 cs. 15

Coal Products—
Alizarine
Reval, 9 cs. £420
Aniline
Melbourne, 3 pks. £65
Aniline Oil
New York, 22 dms. £680
Aniline Salts
New York, 25 dms. £800
Benzol
Boulogne, 47 cks. £160
Carbolic Acid
Kobe, 25 dms. £73
Cape Town, 200 37
Madras, 86 150
Philadelphia, 15 cks. 117
Genoa, 1 7
Cologne, 49 brls. 193
Naphtha
Melbourne, 25 crts. £30
Naphthaline
Hamburg, 6 cks. £56
New York, 88 75
Paris, 55 / 60 bgs. 75
Philadelphia, 667 76
Pitch
Antwerp, 2,723 t. £3,598
Naples, 1,162 1,500
Dunkirk, 145 190
Hamburg, 60 cks. 190
Wellington, 3 2 cs. —
Melbourne, 10 brls. 6
Alexandria, 200 56
Tar
Hamburg, 200 brls. 30 dms. £95
Pt. Elizabeth, 5 tks. 100 dms. 78
Durban, 200 6
Wellington, 9½ 34 —
Delagoa Bay, 100 8
Tar Salts
Hamburg, 6 cks. £53

Copper Sulphate—
Treport, 5 t. 9 c. £95
Wellington, 10 9
Odessa, 20 4 347
Bordeaux, 100 1,876

Cream of Tartar—
Melbourne, 2 t. 10 c. £184
Launceston, 10 60
Wellington, 2 10 177
Durban, 1 75
Dunedin, 5 29
Napier, 10 40
Auckland, 5 19

Disinfectants—
Shanghai, 30 dms. 31 pks. £103
Colombo, 38 12
Madras, 18 22
Melbourne, 5 19
Cape Town, 25 40
Bombay, 4 68 104
New York, 25 brls. 40
Christchurch, 5 cs. 7
Wellington, 20 90
Trinidad, 4 13
Pt. Darwin, 9 pks. (pt) 24
E. London, 42 cs. 44
Durban, 31 78 82

Guano—
Demerara, 50 t. £447

Hydrochloric Acid—
Demerara, 30 carbys. £11

Manure—
Barbadoes, 60 t. £540
Pt. Elizabeth, 49 2 c. 271
Martinique, 76 12 725
Havre, 24 13 80
Wellington, 8 10
Guernsey, 17 4 83

Oxalic Acid—
Newcastle, 6 cks. £45

Phosphoric Acid—
Demerara, 40 cks. £129

Phosphorus—
Wellington, 10 cs. £90
B. Ayres, 4 c. 37

Potash Salts—
Auckland, 12 t. 3 c. £934

Potassium Chlorate—
Wellington, 1 t. 8 c. £45
New York, 10 20
Sourabaya, 10 18

Potassium Cyanide—
Delagoa Bay, 14 t. 163 cs. £3,122
Fremantle, 3 4 c. 335
Sydney, 4 4 465
Melbourne, 6 680
Shanghai, 2 10
Pt. Elizabeth, 19 2,020
Madras, 9 19
Albany, 1 121
Auckland, 4 426
Pt. Darwin, 4 460
Rio de Janeiro, 1 4 107
New York, 100 cs. 476

Potassium Nitrate—
Brisbane, 10 c. £14
Potassium Permanganate—
Melbourne, 1 t. £46
Potassium Prussiate—
New York, 20 cks. £347
Yokohama, 1 t. 60
Prussian Blue—
Ghent, 2 cks. £24
Rotterdam, 3 22
Salt Cake—
Antwerp, 135 t. £236
Saltpetre—
Melbourne, 5 t. £108
Brisbane, 2 40
Rio de Janeiro, 2 19 c. 63
Ghent, 1 19 39
Amsterdam, 10 14
Sheep Dip—
Cape Town, 3 t. 10 c. £75
B. Ayres, 124 28 3,419
Wellington, 7 15 195
Soda—
Colombo, 3 c. £12
Madras, 2 7
Otago, 3 15
Christiania, 1 t. 1 9
Soda Crystals—
Cape Town, 12 c. £5
Colombo, 1 t. 2 6
St. John's, Nfd., 1 16 6
Sodium Bicarbonate—
Bombay, 3 t. 4 c. £17
Malta, 1 7
Pt. Elizabeth, 1 5 18
Townsville, 3 12 26
Sodium Carbonate—
Auckland, 5 t. 2 c. £27
Sodium Nitrate—
Gibraltar, 1 t. £11
Sodium Silicate—
Vera Cruz, 1 t. 19 c. £7
Terceira, 7 19 30
Strontium Nitrate—
New York, 3 t. 10 c. £84
Sulphur Dioxide—
Melbourne, 19 c. £60
Sulphuric Acid—
Colombo, 3 t. 10 c. £40
Madras, 2 10 30
Pt. Elizabeth, 25 cs. 17
Aden, 35 42
Superphosphates—
Martinique, 225 t. £900
Tartaric Acid—
Launceston, 5 c £29
Wellington, 9 50
Adelaide, 9 38
Otago, 3 kgs. 5 44

LIVERPOOL.

Week ending December 7th.

Alkali—
Vera Cruz, 20 t. 3 c. £85
Boston, 5 4 52
Odessa, 94 376
Sydney, 8 7 2 q. 50
Rio de Janeiro, 3 2 1 15
Bahia, 18 1 5
Kavalla, 19 4
Oliveri, 2 3 9
Salonica, 4 19 3 20
Piræus, 10 45
Seville, 25 9 102
Alum—
Lisbon, 21 cks. £20
Varna, 3 t. 15
Calcutta, 49 19 c. 253
Gibraltar, 3 9 3 q. 16
Volo, 1 1 5
Piræus, 3 2 14
Patras, 2 5 2 11
Samsun, 9 13 2 44
Tangiers, 3 15
Adelaide, 2 8
Oporto, 2 10
Ammonia—
Rio de Janeiro, 5 c. £6
Ammonium Bicarbonate—
Bilbao, 4 cks. —
Ammonium Carbonate—
Pernambuco, 1 cs. £2
Trieste, 1 t. 25
Lisbon, 6 brls. 8 c. 2 q. 20
Valparaiso, 1 6 34
M. Video, 5 8
Odessa, 30 kgs. 20 94
Ammonium Chloride—
Antwerp, 10 c. £9
Trieste, 1 t. 30
Smyrna, 1 31
B. Ayres, 6 10
Barcelona, 7 1 193
Marseilles, 18 36
Tocopilla, 1 1 q. 5
Genoa, 16 25
Ammonium Sulphate—
New York, 25 t. 12 c. £257
Naples, 2 20
Valencia, 245 10 1 q. 2,350
Marseilles, 10 100
Shanghai, 1 9
Bordeaux, 5 48
Las Palmas, 51 16 518
Huelva, 5 50
Antimony Sulphide—
New York, 7 brls. £35
Arsenic—
Norkopping, 5 t. 1 c. £86
Bisulphide of Lime—
Rangoon, 1 t. £11
Bleaching Powder—
Baltimore, 168 crts.
Barcelona, 28 cks.
Bari, 20
Boston, 367
Brisbane, 20 dms.
Cape Town, 100 bxs.
Genoa, 42
La Chute, 16
Maranham, 5
Middleton, 86
Montreal, 40 pks.
Nantes, 45
Newport News, 140
New York, 35
Oporto, 25
Rio de Janeiro, 9
Rouen, 44
Boracic Acid—
Rangoon, 5 c. £9
Antwerp, 10 14
Borax—
Adelaide, 1 t. £14
Genoa, 1 14
Christiania, 2 28
New York, 11 c. 33
Rotterdam, 14 2 185
Portland, M., 12 7 1 q. 185
Constantinople, 10 7
Antwerp, 20 3 2 304
Calcium Carbide—
Yokohama, 5 c. £18
Calcium Chloride—
Melbourne, 5 t. 3 c. £11
B. Ayres, 4 15 15
St. Nazaire, 15 5 34
Brisbane, 5 12
Carbolic Acid—
Rouen, 6 t. 12 c. £74
Philadelphia, 9 102
Seville, 2 2 q. 8
Melbourne, 5 9
Yokohama, 3 1 2 148
Hiogo, 11 3 618
New York. 15 cks. 120
Caustic Potash—
Antwerp, 8 c. £9
Valparaiso. 5 t. 1 12 dms. 175
Newport News, 10 280
Vera Cruz, 3 5
San Francisco, 12 20
Caustic Soda—
Alexandria, 57 dms.
Alicante, 40
Amsterdam, 185
Antwerp, 78
Bahia, 34
Barcelona, 40 105 cks.
Bilbao, 150
Bombay, 40
Bordeaux, 14
Brisbane, 106
B. Ayres, 60
Calamata, 30
Callao, 20
Cape Town, 28
Carril, 12
Don Station, 50
Genoa, 237
Hiogo, 277
Hodson's Bay 14 cs
Kavalla, 6
La Canee, 30
Leghorn, 52
Lisbon, 45
London, 45

Madeira, 5
Madras, 5 brls.
Malaga, 10 10
Melbourne, 20 10 cs.
Montreal, 20 50 pks.
Nantes, 78
Naples, 285
New York, 200
Odessa, 508
Parnahyba, 10
Pasages, 30
Penang, 80
Pernambuco, 50
Philadelphia, 50
Piræus, 288
Puerto Cabello, 15
Rangoon, 25
Rio de Janeiro, 57
Rockhampton, 52
Rouen, 180
Salonica, 4
Samarang, 39
San Sebastian, 26 cks.
Seville, 407 49 brls.
Shanghai, 10
Singapore, 42
Tampico, 123
Varna, 22
Victoria, B.C., 10
Vigo, 15
Yokohama, 100

Chemicals (*otherwise undescribed*)
Yokohama, 5 t. £300
Calcutta, 64 8 c. 2 q 285
Santos, 4 13
B. Ayres, 6 11
Havana, 7 3 22
Antwerp, 10 15
Odessa, 3 77
Victoria, W.C.A., 4 6
Philadelphia, 13 13 357
Naples, 4 cks. 33
Barbadoes, 1 6

China Clay—
Ahmedabad, 80 cks.
Baltimore, 861
Boston, 660
Madras, 80
Naples, 40
Newport News, 500
New York, 300 bgs.
Oporto, 20
Philadelphia, 450
Portland, 320

Chromic Acid—
Hamburg, 10 c. £30

Citric Acid—
Tampico, 5 c. £31

Coal Products—
Aniline Oil
Boston, 5 dms.
Aniline Salts
Madras, 5 brls.
Creosote Oil
Bordeaux, 400 cks.
Pitch
Antwerp, 80 t. 18 c.
Genoa, 152
Odessa, 79 brls.
Rouen, 360
Tar
Calcutta, 30 brls.
New York, 20 cks.
Philadelphia, 100

Copperas—
Calcutta, 28 t. 9 c. 2 q. £57
Syra, 10 5 19

Copper Sulphate—
Marseilles, 5 t. 4 c. 3 q. £84
Porto Cabello, 3 3
Havre, 1 16
Colombo, 1 2 21
Bordeaux, 35 6 2 585
Genoa, 19 10 331
Almeria, 2 40
Odessa, 3 3 1 59
Batoum, 9 19 160
Cette, 37 6 1 630

Disinfectants—
Bombay, 1 t. £7

Dyestuffs (*otherwise undescribed*)
Alizarine
New York, 5 cks.
Alizarine Colour
Lisbon, 1 ck.
Aniline Colours
New York, 25 cks. 3 bgs.
Extracts
Boston, 25 cks.
Lisbon, 4 cs.
New York, 31
Logwood
Lisbon, 220 bgs.
Naphthaline Colour
New York, 1 ck.
Naphthol Colour
New York, 5 cks.

Dyestuffs (*otherwise undescribed*)
New York, 5 cks.

Glycerine—
Constantinople, 10 c. £30
Shanghai, 2 6
Havana, 2 6
Bombay, 18 9
Sydney, 1 t. 52

Guano—
Seville, 9 t. 16 c. £62

Hydrochloric Acid—
San Juan, P.R., 1 t. 2 c. £16

Magnesia—
B. Ayres, 9 cks. 2 cs.
Lisbon, 1

Magnesium Sulphate—
Bombay, 100 bgs.
Porto Allegre, 8 cs.

Manure—
Santa Cruz, 62 t. £608
Teneriffe, 26 10 c. 257
Gd. Canary, 2 20
New York, 4 10 55

Oxalic Acid—
Rangoon, 2 kgs. £40
Genoa, 1 ck. 10
Boston, 14 t. 10 c. 395

Paint—
Accra, 40 kgs.
Alexandria, 100
Buenaventura, 10 cs.
B. Ayres, 8 cks. 5
Degama, 10 dms.
Gibraltar, 10 kgs. 8
Kingston, Ja., 150
Lagos, 6
Lima, 10
Manaos, 5 cks.
N. Orleans, 20 kgs.
Onitha, 18
Panama, 4 pks
Para, 2 cks.
Pernambuco, 250 kgs.
St. Louis, 56
Sierra Leone, 96
Singapore, 1,001
Stockholm, 15 cks.
Tocopilla, 12 kgs.
Villa Conception, 2 cks.

Painters' Colours—
Bombay, 1,295 kgs. 78 cs.
C. Coast Castle, 4
Kansas City, { 40 75 brls. / 2 cks.
Para, { 16 6 / 9 kgs. 30 dms.
Santos, 5 cs.
Valparaiso, 46 20

Paraffin Wax—
Barcelona, 100 bgs.
Bari, 20
B. Ayres, 5
Genoa 75
Leghorn, 250
Naples, 50
Rio de Janeiro, 10 cs.
Samarang, 140 dms.
Singapore, 140
Vera Cruz, 44

Phosphorus—
B. Ayres, 12 c. £84

Picric Acid—
New York, 2 t. 2 c. £205

Potash—
M. Video, 1 t. 11 c. 1 q. £18

Potash Salts—
Guaymas, 24 t. 12 c. 2 q. £2,146

Potassium Bichromate—
Ancona, 1 t. 16 c. 3 q. £50
Constantinople, 17 29

Potassium Chlorate—
Hong Kong, 2 t. £60
Odessa, 5 150
New York, 15 450
Rotterdam, 10 c. 16
Gothenburg, 10 314
Naples, 1 30

Potassium Cyanide—
Santos, 2 c. £14

Potassium Prussiate—
Constantinople, 10 c. £31

Salt—
Antofagasta, 225 t.
Antwerp, 186 cs.
Axim, 10
Bahia, 7 6 c.
Baltimore, 455
Barbadoes, 50
Brisbane, 50
B. Ayres, 58
Calcutta, 295 150
Cameroons, 43 10
Cape Town, 72 6
Cavally, 6 4
Chicago, 30
Cienfuegos, 10
Conakry, 50
E. London, 8 18 1
Ghent, 275
Gd. Bassa, 10
Gd. Bassam, 50
Halifax, 141
Jamaica, 5
Lagos, 100
Melbourne, 25 300
Mossel Bay, 10
N. Orleans, 215
New York, 130
Para, 100
Philadelphia, 200
Rio G. do Sul, 35 14
Rosario, 6 13
Rouen, 10
Salt Pond, 12 10
Santiago, 130
Sette Camercons, 7 6
Sherbro, 10
Stockholm, 3 6
Sydney, 574 15
Valparaiso, 167

Salt Cake—
Antwerp, 120 t. £155
Baltimore, 40 1 c. 6 5
Delagoa Bay, 5 1 1 3
Melbourne, 24 18 2 q. 6 2
Philadelphia, 65 16 10 7

Saltpetre—
Mollendo, 5 c. £7
Pernambuco, 2 t. 10 60

Sheep Dip—
B. Ayres, 11 t. 3 c. £318
Melbourne, 14 1 q. 100

Soap—
Alexandria, 20 brls.
Algoa Bay, 200 bxs.
Attaboe, 39
Axim, 350
Barbadoes, 1,025
Bathurst, 50
Bayin, 615
Bombay, 1,434 7 cs. 12 cks.
Bordeaux, 10
Boston, 2
B. Ayres, 2
Buguma, 300
Bulawayo, 50
Calcutta, 12 750 bdls.
Canaria, 416
C. C. Castle, 60 251
Cape Lopez, 1
Cape Town, 1,600 27
Conakry, 151
Constantinople, 10
Curacao, 81
Degama, 200
Delagoa Bay, 1,520 825
Demerara, 1
Dixcove, 200
Dominica, 20
Durban, 500
E. London, 550
Ferrol, 6
Genoa, 137
Ghent, 100
Gibraltar, 150
Greytown, 301
Halifax, 59
Johannesburg, 625
Kingston, Ja., 2,097 5
Lagos, 200
Madras, 20
Malta, 50 23
Manaos, 240
Mauritius, 1,019
Melbourne, 21 25 cks.
Melilla, 50
Menado, 1,000
Montego Bay, 50
Para, 500
Penang, 111
Pernambuco, 3
Pietersburg, 95
Pt. Natal, 201
Progresso, 1
Rangoon, 265
Rotterdam, 200
St. John's, 600
St. Kitts, 100
Salt Pond, 80
Savannah, 50
Sierra Leone, 90
Teneriffe, 1,699
Toronto, 525
Trinidad, 250 1,642
Tumaco, 20
Valparaiso, 2
Vancouver, 2
Watti, 100

Soap Lye—
Bombay, 1 ck.
Rotterdam, 160 dms.

Soda—
Lisbon, 2 cks.

Soda Ash—
Amsterdam, 1,010 bgs.
Ancona, 112
Antwerp, 550 18 cks.
Baltimore, 33 tcs.
Barcelona, 90
Bilbao, 81
Boston, 2,400 42
Calcutta, 95
Callao, 20
Calmar, 182
Gefle, 50
Genoa, 5
Hamburg, 69
Hiogo, 222
Kobe, 218
Leghorn, 100 100
Libau, 150
Messina, 15
Montreal, 15
New York, 24
Oporto, 10
Philadelphia, 616 25
Piræus, 10 brls.
Puerto Cabello, 20
Rio de Janeiro, 50
Rio G. do Sul, 100
Rotterdam, 10
Samarang, 29
Santiago, 22
Seville, 110
Trebizonde, 50
Trieste, 100
Vera Cruz, 28
Vigo, 5
Zante, 147

Soda Crystals—
Alexandria, 60 brls.
Antwerp, 6
Berlin, Ont., 40 bgs. 50
Bombay, 250 kgs.
Calcutta, 33
Malta, 90
Palermo, 12
Pernambuco, 200
Pt. Natal, 25
Pt. Said, 25
Rotterdam, 50

Sodium Bicarbonate—
Amsterdam, 20 kgs.
Antwerp, 8 cks.
Barcelona, 200 4
Batavia, 10
Bayonne, 22
Bilbao, 4
Bombay, 672 5
Brisbane, 20
B. Ayres, 8
Calcutta, 50 bgs. 7
Callao, 5 kgs.
Cape Town, 50
E. London, { 30 / 100 bgs.
Hamburg, 100
Havre, 23 kgs.
Hong Kong, 20
Kingston, Jam., 4
Maracaibo, 10 bgs.
Naples, 5
Odessa, 350 kgs. 200 dms.
Rouen, 70 30 pks.
St. John's, 20
Stockholm, 20
Sydney, 50
Vera Cruz, 100
Yokohama, 500

Sodium Chlorate—
Boston, 100 kgs.
Hamburg, 40
Rotterdam, 50
Seville, 10

Sodium Hyposulphite—
Calcutta, 20 kgs.
Callao, 60

Sodium Silicate—
Bombay, 8 brls.
Malta, 8

Starch—
Nantes, 2 hds.
Pt. Said, 10 cs.

Sulphuric Acid—
Iquitos, 12 c. 1 q. £10

Superphosphates—
Cape Town, 20 t. £65
Castellon, 200 434
Malaga, 50 130

48 16 c. 1 q. 74
10 35
40 90

—
40 kgs. £40
—
1 dm.
2
2 cks.
6 brls.
11 pks.
5 cs.
3
2
4
4
—
4 cks.

NCHESTER.

ending December 7th.

—
2 cks.
Colours—
5 kgs.
g Powder—
12 cs.
Soda—
8 dms.
ls (*otherwise undescribed*)
29 cks.
8 kgs.
ducts—
thylamine
78 cks.
339 t. 11 c.
10 cks.
6 dms.
20
Sulphate—
1 ck.
14 cks.
e—
3 cks.
White—
14 bgs.
Wax—
5 cs.
1
m Carbonate—
3 cks.
55 cs.
Naphthionate—
16 cks.
c Acid—
13 cs.

HULL.

ending December 3rd.

um Sulphate—
100 bgs.
120
1,077
50
500
g Powder—
3 bls.
43 cks.
s (*otherwise undescribed*)
10 cks.
71 27 pks.
15
10
4 554 slbs.
42 pks
56
10 cs.
300 bgs.
50
47 cks.
48 85
10
40 70 brls.
3 pks.
43
22 325
5 15
67 40
4 1 13
6
2

Cottonseed Oil—
Amsterdam, 1,407 c.
Antwerp, 334
Bordeaux, 177
Christiania, 180
Copenhagen, 204
Dunkirk, 492
Ghent, 157
Gothenburg, 154
Hamburg, 473
Konigsberg, 122
Marseilles, 1,375
Rouen, 2,001
Rotterdam, 460
Stavanger, 14
Stockholm, 144
Trieste, 200

Dyestuffs (*otherwise undescribed*)
Christiania, 25 bgs.
Ghent, 1 ck.
Riga, 3 cs.
Reval, 2 2 bls.
Stettin, 60 bgs.

Glue—
Amsterdam, 3 cks.
Hamburg, 5 bgs.

Linseed Oil—
Amsterdam, 100 c.
Christiania, 159
Copenhagen, 6
Hamburg, 118
Stavanger, 35

Manure—
Venice, 123 bgs.

Naphthaline—
Riga, 192 bgs.

Paint—
Danzig, 8 cks.

Painters' Colours—
Amsterdam, 2 cks.
Antwerp, 60 1 cs. 18 dms. 10 pks.
Christiania, 29 2 3
Copenhagen, 17 3
Drontheim, 20 dms.
Genoa, 10
Gothenburg, 7 pks.
Hamburg, 37 3
Harlingen, 8
Marseilles, 20
New York, 562 20 dms.
Rouen, 19
Rotterdam, 2
Stettin, 25
Stockholm, 1
Trieste, 19

Pitch—
Antwerp, 188 t.
Dunkirk, 220

Slag Meal—
Georgetown, 330 t.

Soap—
Amsterdam, 121 cs.
Christiania, 1
Drontheim, 52
Reval, 1

Tallow—
Genoa, 56 brls.
Hamburg, 25 cks.
Rotterdam, 4

Tar—
Amsterdam, 5 cks.
Antwerp, 4 brls.
Drontheim, 5
Dunkirk, 16
Hamburg, 5

Varnish—
Amsterdam, 2 cs.
Antwerp, 20 cks. 2 pks.
Danzig, 2
Drontheim, 5
Genoa, 1
Hamburg, 1

Whiting—
Christiania, 2 cks.

GLASGOW.

Week ending December 8th.

Alum—
Halifax, £4 4

Alumina Sulphate—
Hamburg, 111 t. 7 c.
Rotterdam, 50 1

Ammonium Sulphate—
Nantes, 10 t.
Penang, 11
Philadelphia, 51 10½ c.
Rotterdam, 50 14

Asbestos—
Hong Kong, £28 4s.

Bleaching Powder—
Calcutta, £655

Borax—
Amsterdam, £18
Delagoa Bay, £39 14s.

Calcium Carbide—
Yokohama, £27

Carbolic Acid—
Rotterdam, £100

Chemicals (*otherwise undescribed*)
Rotterdam, £566

Coal Products—
Creosote Oil
Boston, £80
Pitch
Christiania, £25
Hamburg, 101 t. 8 c.
Tar
Boston, £103
Christiania, 35

Dyestuffs (*otherwise undescribed*)
Calcutta, £46

Extracts—
Canada, £130 11s.

Farina—
Calcutta, £82 16s.

Gelatine—
Philadelphia, £261

Linseed Oil—
Penang, 2 t. 6½ c.

Magnesium Sulphate—
St. Stephen, N.B., £25 15s.

Paint—
Hong Kong, £70
Kimberley, 45
Yokohama, 100

Painters' Colours—
Bangkok, £33 10s.
Calcutta, £285
Cape Town, 44
Hong Kong, 153
Iloilo, 39
Johannesburg, 36
Penang, 185
Shanghai, 45
Singapore, 99
St. John's, N'fd., 21

Paraffin Wax—
Christiania. £3
Fredrikshald, 3 t. 3¼ c.
Hamburg, 1 11¼
Singapore, £73 17s.

Potassium Bichromate—
Amsterdam, £169
Hiogo, 580

Potassium Prussiate—
New York, £123 15s.

Rosin Oil—
Rotterdam, £20

Salt—
Saigon, 4 t. 10 c.

Soap—
Calcutta, 3 t. ⅛ c.
E. London, 2 10

Starch—
Rotterdam, £190

Tallow—
Amsterdam, 1 t. 4 c.

TYNE.

Week ending December 3rd.

Alkali—
Christiania, 1 t. 1 c.
Hamburg, 21 14
Rotterdam, 15

Alum—
Seville, 3 t. 14 c.

Ammonium Sulphate—
Odense, 5 t.

Antimony—
Antwerp, 1 t.
Hamburg, 1
Rotterdam, 2

Arsenic—
Antwerp, 4 c.

Barium Binoxide—
Genoa, 13 t. 8 c.

Barium Carbonate—
Hamburg, 225 t.

Bleaching Powder—
Antwerp, 6 t. 7 c.
Bergen, 8
Christiania, 14 3
Copenhagen, 2 13
Hamburg, 10 4
Rotterdam, 13 2
Venice, 5 3

Carbolic Acid—
Odense, 12 c.

Castor Oil—
Hamburg, 14 c.

Caustic Soda—
Antwerp, 10 t. 3 c.
Christiania, 2 18
Copenhagen, 25 4
Genoa, 9 11
Horsens, 1 9
Rotterdam, 10 3
Stavanger, 1 4
Venice, 13 1

Litharge—
Hamburg, 2 t. 3 c.

Magnesia—
Antwerp, 10 c.
Hamburg, 11

Paint—
Rotterdam, 2 t.

Painters' Colours—
Hamburg, 4 tins

Plumbago—
Aarhuus, 4 c.

Soda—
Antwerp, 4 t. 18 c.
Christiania, 11
Rotterdam, 15 3
Venice, 10 10

Soda Ash—
Venice, 2 t.

Sodium Sulphate—
Christiania, 110 t.

Sulphuric Acid—
Seville, 1 c.

White Lead—
Copenhagen, 8 c.

GOOLE.

Week ending November 30th.

Alkali—
Ghent, 10 cks.

Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck.
Antwerp, 16 8 dms.
Boulogne, 1
Delfszyhl, 16
Dunkirk, 1 cs.

Coal Products (*otherwise undes.*)—
Amsterdam, 87 cks.
Boulogne, 48 5 cs. 12 dms.
Dunkirk, 1
Ghent, 3
Rotterdam, 1

Dyestuffs (*otherwise undescribed*)
Antwerp, 1 ck.
Ghent, 2 cs.

Manure—
Ghent, 235 bgs.

Painters' Colours—
Boulogne, 1 ck. 5 cs. 1 pk.
Ghent, 2 dms.
Rotterdam, 9 1

Pitch—
Antwerp, 942 t.

GRIMSBY.

Week ending December 3rd.

Alkali—
Rotterdam, 5 cs.

Ammonium Sulphate—
Antwerp, 36 t. 9 c.

Caoutchouc—
Esbjerg, 1 pk.

Chemicals (*otherwise undescribed*)
Dieppe. 14 cs.

Coal Products (*otherwise undes.*)—
Dieppe. 82 cks.
Rotterdam, 10 btls.

Colours—
Port au Prince, 20 cks. 1 dm.

Dyestuffs (*otherwise undescribed*)
Dieppe, 2 pks.

Painters' Colours—
Antwerp, 1 cs.
Dieppe, 3 kgs. 3 cks.
Hamburg, 1 31 pks.
Rotterdam, 9

Pitch—
Antwerp, 78 t.

PRICES CURRENT.

WEDNESDAY, Dec. 14, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,			35/-
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	5	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2½
,, = 24° B. .. .. ,,	0	0	1½
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	0	0
,, ,, (grey) Hull .. .. ,,	10	0	0
Aniline Oil (pure) .. .. per lb.	0	0	5
Aniline Salt ,, ... ,,	0	0	4½
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8¾
,, 50/90 ,, ... ,,	0	0	8¾
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	55	5	0
,, Sulphate .. .. ,,	18	10	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	25	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	5	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, *Carbonate (white lead) pure* .. .. .. ,,	17	10	0
,, *Nitrate* .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	15	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	16	10	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	5	0
Linseed .. .. ,,	17	10	0
Stearine .. .. ,,	25	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	14	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	5	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	15	0
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	7	6
,, Acetate (ex-ship) .. .. ,,	12	5	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Borate (Borax) .. .. nett per ton	14	10	0
,, Bichromate .. .. ,, per lb.	0	0	2¼
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	4¾
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	0
,, ,, (Glauber's Salts .. .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6¾
Sulphur (Flowers) .. .. per ton	7	7	0
,, (Roll Brimstone) ... . ,,	6	3	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	22	10	0
Tin Crystals .. .. per lb.	0	0	5¾
,, English Ingots .. .. per ton	84	10	0
Zinc (Spelter) .. .. ,,	24	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	0	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

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ents intended for insertion in the current week's issue the office by **Thursday morning** at the latest.

THE LONDON SEA-WATER SCHEME.

NEARLY three years ago we called attention to a Bill which was about to come before Parliament, and which sought to provide powers for bringing a supply of sea water to the Metropolis. This week the aims and objects of that Bill (which in due course received the Royal assent) have been materialised by the floating of the London Sea-Water Supply Co., Ltd., which has been formed to turn to account the advantages conferred by this Act.

In February, 1896, we reviewed in these columns the "pros" and "cons" of a sea-water service, and practically summed up in favour of the scheme, because, although there were "cons," the "pros" predominated.

At that time we could not gauge the opposition of the water companies, but since then the water famine in London has modified the opinions of the companies somewhat, and has certainly aroused the consumers to the fact that if the 1,000 million gallons—a figure not easily grasped—which are annually supplied by the water companies solely for municipal purposes could be saved, the reserve supply of drinking water might be fortified, and possibly its quality improved.

None of the advantages of a sea-water service which we instanced in 1896 have been exploded in the interim. On the contrary, for such purposes as street watering and fire extinction sea water has proved to be superior to fresh water, while for sewer flushing it is found to be at least as efficient as fresh water. According to the recorded experience of numerous town surveyors and others who have used sea water for many years, its efficiency for watering roads and streets is more than double that of fresh water, and the reports state that the use of sea water will materially diminish, if not eradicate, the offensive odours arising from wood pavements in dry, warm weather. Regarding fire extinction in particular, there will be a valuable auxiliary in the sea-water service for the mains are capable of supplying 10,000,000 gallons per day, which will be constantly under the pressure of a head of about 220ft. of water above sea level.

Even our remarks concerning the tempting aspect of a sea bath in your own suburban house promise to be fulfilled at the reasonable cost of 2d. per bath.

The authorised intake is to be little eastward of the village of Lancing, in Sussex, where the sea water is of unquestionable purity. There will be only one pumping station, and that being contiguous to the Lancing railway station, the necessary coal can be delivered direct into the Company's engine-house. At this point the water will be pumped from settling tanks to a reservoir on the adjoining downs, 480ft. above the sea level, whence it will flow in mains laid along the roads through Horsham, Dorking, and Leatherhead, to Epsom (where there will be a second reservoir), thence through Streatham and Battersea into central London by special mains. The total distance from the coast to London is 55 miles.

We see that the estimated cost of executing the necessary works is now put down at £595,000. In 1896 the estimate was £450,000. This is somewhat reassuring, as it shows the estimates have been gone into in greater detail, and with more caution, than was the case when the scheme was first suggested.

We see a contract has been entered into for the execution of the work for the higher figure, within a period of twenty-one months, but, of course, such contracts are liable to require extension both in the matter of time and money, and we hardly expect to see the exact figure or time adhered to.

Nevertheless, we think the scheme justifies a little latitude, which, if granted judiciously, will repay the supporters. We wish them and their scheme success.

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE December meeting of the present session was held on Wednesday, 14th inst., at University College, Nottingham, Dr. Stanley Kipping, F.R.S. being in the chair. Dr. J. J. Sudborough described an apparatus for heating sealed tubes at a constant temperature. Having found that much time was lost in adjusting the ordinary arrangements, which depend on the amount of gas admitted through a tap, he had devised an apparatus, the efficiency of which depended on the constancy of the temperature of the boiling point of some particular substance. Thus, in his case he had occasion to heat some sealed tubes at a temperature of 160° and he used ordinary cumene boiling at from 160° to 163°.

The apparatus consists of a copper cylinder about two feet long and five or six inches in diameter placed horizontally on an appropriate stand. The cylinder is dished underneath for the reception of the liquid to be heated. To the upper part of the cylinder a Sohlet condenser is attached to return the escaping vapour into the apparatus. Two diaphragms, riveted to the cylinder and duly perforated, loosely hold four small copper tubes about one inch in diameter, which serve as rests for the long sealed glass tubes to be heated One end of the large cylinder is permanently closed, a brass cap being screwed on at the other end, which can be opened, the joint being made good by a thin strip of cork. The apparatus can be worked without difficulty up to 200° by boiling in it substances having the requisite boiling points.

Mr. Paton, adverting to the objection made by the coppersmith to Dr. Sudborough that it was necessary to rivet the dish on the under side of the apparatus to the cylinder, he thought there really was no difficulty in beating it out of the tube itself as Dr. Sudborough had desired. Of course, if so made, the dish would necessarily be thinner than the body of the tube.

The second paper read was entitled, "Note on the preparation of the two isomeric *beta*-bromcinnamic acids" by L. L Lloyd and Dr. J. J. Sudborough.

Dr. Sudborough explained that there are two isomers of the *alpha*-bromcinnamic acid—($C_6HCH{=}CBrCOOH$) and that there are also two *beta*-acids ($C_6H_5CBr{=}CHCOOH$) with which latter he was at present concerned. He had been working with Mr. Lloyd in the production of these compounds from phenylpropionic acid ($C_6H_5C{=}CCOOH$) and hydrogen bromide (HBr), with the result that on one occasion Mr. Lloyd had obtained only one isomer, namely, the one boiling at 159°. He (Dr. Sudborough), on the other hand, got a mixture of the two *beta*-bromcinnamic acids, the one boiling at 159° and the other at 134°. Looking into the matter, the only difference they could find in their operations was that Mr. Lloyd had left his flask with cooling dish in a dark cupboard, whereas his own flask had been left on the laboratory bench where light had had free access to it. A number of experiments were conducted to prove that the action of light was the correct explanation. Working in the light from 15 grammes of phenylpropionic acid they obtained 8 grammes of *beta*-bromcinnamic acid boiling at 159°, and 4 grammes of the isomer boiling at 134°. In another experiment they got 6 grammes of each.

Mr. Paton suggested that although the substances were cooled in the experiments, yet heat rays as well as light rays might possibly penetrate into the interior of the flasks, as this was not completely surrounded by the ice mixture.

Mr. Carulla asked whether they could at will obtain the whole product as the isomer boiling at 159° by conducting the reaction in the dark. What was the total of the resulting isomer in that case, say from 15 grammes of the mother substance?

The Chairman said the subject of the paper seemed to bear on some *point connected with dyeing, and* invited remarks in that sense.

Mr. Pentecost said that when dyeing with aniline black the action should go on in the dark, as otherwise the colour would come out yellowish or greenish.

Mr. J. T. Wood pointed out that in the (German) Chemiker-Kalender the melting point of *beta*-bromcinnamic acid is given as 120°. He had also observed a similar fact to that mentioned by Mr. Pentecost in the dyeing of skins, but the process could not be used, as the temperature at which the skins had to be dried spoilt them.

Mr. Pentecost: Cotton goods are not heated generally beyond 130°.

Dr. Sudborough in the course of his reply said they had not studied the effect of heat rays on the reaction. They could obtain the whole of the *beta*-bromcinnamic acid as the isomer boiling at 159° by conducting the reaction in the dark. The total obtained would be about the same as the total when working in the light. In this connection he might mention that on one occasion when HBr had been poured on the phenylpropionic acid instead of dropping the latter into the former, as they usually did, no bromcinnamic acid whatever was produced. The statement in the Chemiker-Kalender referred to by Mr. Wood was an error, 120° being the boiling point of one of the *alpha* acids.

The Chairman thought the paper they had heard was useful in showing the great influence that light has upon chemical reaction. In some cases light has a much greater effect than an increase of temperature. On one occasion he treated a substance with bromine and obtained a product which he afterwards found impossible to reproduce, possibly owing to some effect of light which he was unable to control.

A vote of thanks to the authors of the papers terminated the proceedings.

IMPORTS AND EXPORTS FOR NOVEMBER.

THE Board of Trade returns for last month are not very satisfactory, as far as regards chemicals. The *imports* of nitrate and saltpetre are much heavier, as are also raw rubber and gutta-percha. The *exports* of most products are lower, with the exception of chemical manures.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.		Quantities. 1897.	Quantities. 1898.
Margarine	Cwt.	79,674	78,021
Copper Ore and Regulus	Tons	12,482	13,687
Pyrites	,,	51,433	52,548
Tin	Cwt.	41,339	25,827
Alkali	,,	16,401	26,425
Brimstone	,,	25,426	33,851
Borax	,,	—	—
Dyes, Coal Tar	£.	5,508	68,164
Saltpetre	Cwt.	10,537	21,641
Petroleum	Gall.	16,680,094	15,143,472
Turpentine	Cwt.	56,816	12,012
Guano	Tons.	3,038	2,795
Nitrate of Soda	,,	4,460	8,369
Paraffin Wax	Cwt.	83,340	74,674
Rosin	,,	69,632	63,878
Tallow and Stearine	,,	153,330	4,232
Tar	Barrels	13,088	33,649
Oil Seed Cake	Tons.	28,865	40,134
Wood Pulp	,,	39,403	200

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.		Quantities. 1897.	Quantities. 1898.
Alkali	Cwt.	472,170	331,381
Cement	Tons.	26,325	25,008
Coal and Coke	,,	3,192,581	3,453,216
Copper, all kinds	Cwt.	90,901	105,305
Iron and Steel	Tons.	313,365	252,537
Chemical Manures	,,	25,306	30,726
Oils, seed	,,	4,866	3,679
Salt	,,	47,556	40,835

DETECTION OF NORMAL CARBONATE IN BICARBONATE OF SODA.—A 0·1 per cent. solution of quinine hydrochloride is not precipitated by sodium bicarbonate unless more than 2 per cent. of normal carbonate is present. To apply the test, 3 grammes of bicarbonate are dissolved in 50 c.c. of water at a temperature of 5° or 6° C., without agitation, in a closed vessel. On adding an equal volume of the quinine reagent, the mixture should remain clear.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Indigo Colouring Matters. G. W. Johnson. 25,614. December 5.
Indigo Colouring Matters. G. B. Ellis. 25,634. December 5.
Manufacture of Calcium Carbide. H. Maxim. 25,656. December 5.
Treating Waste Fish, etc. J. F. Johnstone. 25,660. December 5.
Drying Air. A. Millar. 25,697. December 6.
Smoke Consuming. H. Schofield and O. P. Macfarlane. 25,708. December 6.
Manufacture of Hypochlorite of Soda. M. Muspratt, E. S. Smith, and The United Alkali Company, Ltd. 25,748. December 6.
Drying and Painting Compound. E. O. Taflin. 25,772. December 6.
Extracting Metals from their Ores. J. Fraser. 25,784. December 7.
Explosives. J. E. Evans-Jackson. 25,838. December 7.
Extraction of Metals. G. Dillberg. 25,875. December 7.
Manufacture of Hypochlorite of Soda. M. Muspratt, E. S. Smith, and The United Alkali Company, Ltd. 25,925. December 8.
Manufacture of Alkaline Hypochlorite Solutions. E. S. Smith and The United Alkali Company, Ltd. 25,962. December 8.
Manufacture of Alkaline Hypochlorite Solutions. C. L. Higgins, M. Muspratt, E. S. Smith, and The United Alkali Company, Ltd. 25,963. December 8.
Manufacture of Indigo. J. Y. Johnson. 25,966. December 8.
Cyaniding of Ores. F. M. Martino and F. Stubbs. 25,979. December 8.
Amalgamating Apparatus for Metal Extraction. A. Lavoix. 25,983. December 8.
Manufacture of Oxides. C. S. Bradley and C. B. Jacobs. 26,059. Dec. 9.
Manufacture of Soluble Barium Salts. C. S. Bradley and C. B. Jacobs. 26,060. December 9.
Manufacture of Benzene, Anthracene, and other Polymerized Acetylene Products. C. S. Bradley and C. B. Jacobs. 26,061. December 9.
Preventing the Formation of Boiler Scale. Maiche, Limited. 26,065. December 9.
Manufacture of Pure Lead Oxide. R. Bayer. 26,123. December 10.
High Temperature Furnaces for Carbide Manufacture, etc. F. J. Bergmann. 26,134. December 10.
Extracting Rubber and Recovery of the Solvent. J. de la Fresnaye. 26,157. December 10.
Concentrating Sulphuric Acid. J. L. Kessler. 26,169. December 10.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in or Relating to Electric Furnaces for the Production of Calcium Carbide and other Substances. J. Bastick, 1, Carrill-grove, Levenshulme, Manchester, and W. A. Thornton, Belper House, Market-place, Wetherby, Yorks. Eng. Pat. 29,009. December 8, 1897.

The furnace is, generally speaking, built on the familiar lines common to carbide furnaces of this type, and is designed for executing the process described in patent 29,008/97, etc. (*C.T.J.* 602 p. 353). The chief feature of novelty is that the furnace box is given a reciprocating motion, while the carbon conductors, which dip vertically into the contents of the box, are rotated, and can be raised or lowered. There are five figures, which should be consulted for the details of construction.

Improvements in or Relating to Electric Furnaces for the Production of Calcium Carbide and other Substances. J. Bastick, 1, Carrill-grove, Levenshulme, Manchester, and W. A. Thornton, Belper House, Market-place, Wetherby, Yorks. Eng. Pat. 29,011. December 8, 1897.

This patent is substantially a modification of the preceding specification, in which special claim is laid to a furnace box lined with non-conducting material, and having a hinged bottom upon which a carbon hearth is mounted. This box is capable of being wholly or partially rotated, or receiving a reciprocal motion, and of also being raised or lowered to and from a number of carbon electrodes, which move in fixed centres only. There are three figures.

Improvements in or Relating to Apparatus for Treating and Purifying Sewage, Waste, and similar Waters. F. Eichen, Wiesbaden, Germany. Eng. Pat. 149. January 3, 1898.

The sewage is passed through settling tanks, divided into V-shaped compartments, and containing baffle boards, by raising or lowering which the velocity and direction of the current can be regulated. A vertical roughing filter is fixed at the end of the last section of the compartments, after which the liquid passes on to an aërating filter. There are two figures.

Improvements in or Relating to Apparatus for Clearing and Purifying Sewage, Waste Waters, and the like. W. Bruch, 47, Belle-Alliance-strasse, Berlin, S.W. Eng. Pat. 16,180. July 25, 1898.

The sewage, etc., with its charge of chemicals, passes down a shute, in which is a stirring device, and passes through perforated pipes into the bottom of a settling tank, with converging walls. As the liquid rises, the precipitated sludge collects at the bottom, and is let off by a sludge valve and conduit. Before overflowing the top of the tank, the liquid passes through a layer of filtering material, after which it flows down a second shute to the bottom of the next settling tank. There are three figures.

Improvements Relating to the Reduction of Sodium, Potassium, and like Metals from their Salts and to Apparatus therefor. C. E. Acker, East Orange, Essex, New Jersey, U.S.A. Eng. Pat. 6,636. March 18, 1898.

A current of electricity is passed through a bath of molten lead in a suitable furnace, and on to the surface of the lead dry salt is quickly fed in. The anode is then slightly raised to form an arc. The whole charge soon becomes molten, and chlorine is liberated in one compartment, and sodium volatilised in the other. The sodium vapour is carried round through a condensing pipe by a current of nitrogen, which is naturally kept in motion by the difference in temperature between the inside of the furnace and the condensing chamber. There are four figures, which should be consulted for the details of construction. In many respects they are noteworthy.

An Improved Method of Preparing a Rosin Soap for Paper Sizing, containing an admissible quantity of Free Rosin. H. Hampel, Klein-Neusiedl, near Vienna, and V. Zampis, Durergasse 13, Vienna VI. Eng. Pat. 20,058. September 21, 1898.

Dry rosin is mixed with 3 % of dry soda ash, and dissolved in a little water, in a covered vessel, but without steam pressure or much live steam, the necessary temperature being but 80°—100° C. To the dissolved rosin another addition (6—7%) of soda ash is then made, according to the chemical composition of the water used. The largest amount of free rosin permissible is obtained, but exception is taken to the advantages of obtaining unproportional quantities of free rosin (c.f. patent, 22,862,1897, *C.T.J.* 603. p. 369). There are two figures illustrating the stirring gear and heating arrangements of the kettle which is used.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for October. The total shipments were 79,524,827 gallons, compared with 87,843,419 gallons in 1897. The total for the ten months ending October, 1898, was 844,602,871 gallons, against 820,829,840 gallons in the same period of 1897. The details of the shipments are as follows:—

			CRUDE PETROLEUM.	Gallons.
Total,	October,	1898	.....	13,619,818
,,	,,	1897	.....	10,164,447
			NAPHTHAS.	
Total,	October,	1898	.....	1,532,194
,,	,,	1897	.....	1,291,533
			ILLUMINATING.	
Total,	October,	1898	.....	53,485,056
,,	,,	1897	.....	71,406,746
			LUBRICATING AND PARAFFIN.	
Total,	October,	1898	.....	5,614,701
,,	,,	1897	.....	4,718,657
			RESIDUUM.	
Total,	October,	1898	.....	5,273,058
,,	,,	1897	.....	262,036

THE OWENS COLLEGE STUDENTS' BAZAAR.—The amount which it was sought to raise by this bazaar was £5,000, and at the close the amount realised was £4,306. 17s. 5d. The proceeds of the first day were £1,571. 11s. 1d., of the second day £1,388. 19s. 8d, and of the third day £1,346. 6s. 8d., making a grand total of £4,306 17s. 5d.

RAILWAY COAL CONTRACTS.—On Monday the contracts were practically settled for the next year's supply of the locomotive coal for the North-Eastern Railway. Tenders were asked for and submitted, and counter offers were made by the company which have been generally accepted. The price is about 9d. per ton above that of the contracts that are made near expiry. The quantity is believed to be nearly 1,000 tons daily, but part of this is drawn from the Yorkshire collieries

Reports of Companies.

PETRIFITE, LTD.

The ordinary general meeting of the shareholders of this company was held last week at Winchester House, Old Broad-street, E.C. The Chairman said the meeting was called in order to comply with the articles of association of the company, but no balance-sheet could be placed before the shareholders, as the arrangement with regard to the deferred dividends on a large proportion of the vendors' shares necessitated the accounts being made up to December 31st of this year, whilst the year's accounts connected with the works in Greece could not possibly be received in time for the auditors to make their report for a considerable period after that date. The board had reason to believe that the success of the company was now assured. At the same time, they must ask the shareholders to bear in mind that it was impossible for an entirely new concern such as theirs to be brought into a dividend-paying condition within the first year of its existence. Unexpected delays had occurred, and an opportunity had arisen to purchase some freehold land at St. John, on the coast of Euboea, which was very favourably situated for working the necessary kilns, stores, and shipping wharfs. The directors considered this would be of great value, as it would place the company in a much stronger position than if they had to erect their works on leasehold property. This involved reconsidering the whole question of transport from the quarries to the coast, and they had decided to lay down at once a railway some seven miles long from Galataki to St. John. Their managing director had been three months in Greece pushing the works on to completion, and reported that he hoped the railway would be in working order before the end of January, and that some of the permanent kilns would be ready to fire up before the end of this month. Until the railway was at work, however, they could not rely upon keeping the kilns fully supplied with magnesite ore. The directors had always felt that the success of the company was not dependent upon the sale of Petrifite cement only, but that it rested on the solid foundation of their magnesite quarries, containing, as they did, an unlimited supply of the purest magnesite so cheaply won that it practically gave them the command of the markets. With regard to Petrifite cements, they would only be able to manufacture it on the most limited scale, until the railway and permanent kilns were at work. Mr. Schwinde asked whether the board saw its way to carry the matter through successfully without a further issue of capital or debentures. The Chairman said that of course it would be a great advantage to have more. When the company was formed they asked for £50,000.; but when they did not get so much from the public they had to cut down their methods of procedure. If they had more money they would be able to bring things to a successful issue much more rapidly; however they thought they saw their way to bring the enterprise to success. He intimated that it had been resolved by the board that day to make the final call of 2s. 6d. on the shares. The meeting then stood adjourned.

SANTA ELENA NITRATE CO, LTD.

The report of the directors of the Santa Elena Nitrate Company, Limited, to June 30 last states that the accounts for the year, after allowing £352 for depreciation written off animals show a balance at the debit of profit and loss account of £278. Deducting this sum from £1,652. brought forward from last year, and adding £173 included in last year's liabilities now waived, leaves a total at the credit of profit and loss account of £1,548 to be carried forward. The condition of the nitrate market, with very little chance of an immediate improvement, has decided the Board to continue the policy advocated at its last meeting of not producing any nitrate, whilst at the same time keeping the machinery in as good a state of preservation as possible. Expenses both in Chili and London have been reduced to a minimum. In the stock of iodine, which is valued in the balance-sheet at cost and realises a large profit, the company has a valuable asset. The directors have again waived their fees and made all the economies in their power.

LAGUNAS SYNDICATE, LTD.

The ordinary general meeting of the shareholders was held last week at Winchester-house, E.C. Mr. Robert Harvey, who presided, stated that the gross profits for the year ended June 30 last amounted to £35,716., from which had been deducted London charges—which were very moderate—as well as the debenture interest. With regard to the £1,000. which had been written off the debenture issue expenses, he had received a communication from a shareholder expressing disapproval that the figure was not larger. The directors were of opinion, however, that, if £1,000 were written off annually, concurrently with the disappearance of the debentures, it would be quite sufficient to meet the exigencies of the case. The loss on exchange for the year was £1,736., but to a large extent this was merely a book entry. In the balance sheet there appeared, as an asset, an amount of £12,000., representing litigation expenses. This was an item over which the board had no control, but they expected to receive it back in the event of the decision of the Court in favour of the syndicate not being reversed on appeal. Had it not been for the fact that they had to provide £15,000. for the service of the debenture debt and the sinking fund, the board would not have worked the *oficina* anything like so much as they had done during the period under review. For ten months out of the twelve they had kept the works going, although the profit earned only amounted to 6d. per quintal. The view of the board was that, apart from the special circumstances he had mentioned they were not justified in using up their *caliche* without securing a profit of at least 10d. or 1s. per quintal. The importance of forming a combination of nitrate producers was evident, and steps were being taken with that object. He hoped that, early in the new year, such a combination would be brought about. In conclusion, he moved the adoption of the report, which was seconded by Mr. R. R. Lockett. Replying to a shareholder, who asked if the board could not see their way to do something to stop further litigation, the chairman pointed out that they were the defendants, and must defend themselves. It was for the plaintiffs to stop the litigation. The judgment of Mr. Justice Romer gave the plaintiffs even less than the board of the syndicate offered to submit to expert arbitration. Had that offer been accepted it would have had the effect of saving the large sum of £46,000 which had been spent by the plaintiffs and defendants in the litigation up to the present time. The report was adopted.

NEW TAMARUGAL NITRATE CO., LTD.

The report of the directors of the New Tamarugal Nitrate Company, Limited, to July 31 last states that the net loss for the year is £10., and after paying £14,331. to the debenture service fund, in accordance with the agreement made with the debenture-holders referred to below, and £1,053 for interest on loans, there is a balance to debit of profit and loss account of £15,394. This, added to the previous balance, makes a total debit balance of £21,521. 18s., as shown in the balance-sheet. The unfavourable result of the year's working was caused by the constant fall in the price of nitrate. Early in the present year prices fell to the lowest point that has ever been known. Considerable sums have been written off to profit and loss account for depreciation of animals, plant, &c., amounting in the aggregate to over £3,000. In view of the low selling prices, it was deemed advisable to reduce production. Oficina La Patria has therefore been closed, and the production is carried on only in Oficina La Palma. All expenses have been reduced as much as possible Negotiations for a combination of producers have been reopened, but it is impossible to say at present what will be the result. The subject is engaging the earnest attention of the directors, with the object of securing to this company a fair quota of the total quantity to be dealt with. At a meeting of the debenture-holders, held July 14 last, certain modifications of the trust deed for securing the debentures were duly authorised, and have since been implemented, whereby (amongst other relief to the company) the moneys applicable to redemption of debentures will in future be provided only out of the profits in excess of the amount required for payment of the half-yearly interest. Any deficiency in the debenture service fund will rank as against subsequent profits next after interest. Two of the directors (Messrs. Inglis and Schintz) have guaranteed payment of the interest up to August 1 next, and they advanced the amount required for the half-year which fell due on August 1 last. The Bankers' Investment Trust, Limited, has been appointed a trustee for the debenture-holders (in place of Mr. G. G. Pearson, who retired through illness), jointly with Sir Francis Evans, K C M G., M P.

KENT COAL AND FINANCE CO., LTD.

The report of the directors of the Kent Coal Finance and Development Co. states that this company was formed in June, 1897, for the purpose of acquiring and dealing in Kent coal securities, and also for acquiring mineral estates in Kent and exploring the same either independently or co-operatively with other Kent coal companies. Steps were at once taken to secure a substantial interest in the minerals underlying important estates in the county of Kent, which were very favourably reported upon, and which the directors were advised it was desirable for the company to acquire. The Broome Park estate, covering (including manorial rights) about 14,000 acres, has been acquired, subject to the payment of balance of purchase money. An important boring is in progress closely adjacent to this estate, reports from which show that the strata reached correspond geologically with those overlaying the coal measures proved at Dover. Negotiations were also entered into for obtaining mineral rights under the Penshurst estates, but these came to an end owing to the death of Lord De Isle and Dudley, and to the concurrence of an incumbrancer on the property not being obtainable. The company has acquired 77,000 fully-paid shares in the Kent Collieries Corporation, Limited, and has also control of further large blocks of shares. The directors regret that the present nominal quotations for shares in the Kent coal undertakings represent an apparent heavy loss to the shareholders. They, however, desire to express their un-

qualified opinion that such quotations by no means represent the intrinsic value of the company's securities and investments. In this view they are fully supported by the best available experts' opinions as to the explorations now proceeding in the county of Kent, and as to the future earning capacity of the Dover Colliery in particular, the sinkings at which are rapidly and satisfactorily proceeding. The directors have reasons to hope that the coming year will see a resumption of values approximating, or even exceeding, the cost of the company's holdings

HERMAND OIL CO., LTD.

The report of this company for the year ending 31st March states that the directors have for some time back had under their serious consideration the advisability of restarting the works. To assist them in arriving at a decision they thought it well to take expert advice. The directors are glad to be able to state that the report obtained is of such a nature as to justify them in recommending the restarting forthwith of the works, more especially as they have subsequently been able to conclude an arrangement with the landlords, whereby a substantial reduction has been made in the rate of lordship on shale. It will doubtless be obvious to the shareholders that, if the company is to make a fresh start and have a fair chance, it will be necessary to raise further capital. The directors are of opinion that the best course to adopt is to reconstruct the company, and they hope to be in a position to give full particulars of a scheme with that end in view to a meeting to be held early in the ensuing year. At the request of the directors, Mr Ebenezer Chalmers, Bonnington, Leith, agreed to join the board, and was accordingly elected a director. His appointment falls to be confirmed by the shareholders at the ordinary general meeting. The director retiring at this time is Mr. Russell, who is eligible for re-election. The auditors, Messrs. Chiene and Tait, C.A., also retire, and, being eligible for re-election, the directors recommend their re-appointment.

TREATMENT OF MANCHESTER SEWAGE.

EXPERTS' PRELIMINARY REPORT.

At the meeting of the Rivers Committee held on Monday, Mr. Coun. Dreyfus presiding, the preliminary report of the sewage experts appointed by the Council last spring was read. (*C.T.J.* 575, p. 363.) An announcement was also made that the Local Government Board have determined to hold an inquiry into the working of the bacteriological system of sewage treatment in Manchester, when the experts may be expected to give evidence. This inquiry will be held on January 12th next. It is proposed that the scope of the inquiry shall be confined to the main principles determining the treatment of the sewage at Davyhulme, and that an adjournment should then be made for the purpose of preparing a statement of plans, estimates, etc. These are to form the subject of a later inquiry. In view of the visit of the representatives of the Local Government Board an application is to be forwarded to the Mersey and Irwell Joint Board praying that the hearing of their case against the Manchester Corporation may be postponed from January until the 20th of February. By the latter date it is expected that Sir Bosdin T. Leech, the chairman, will have returned from his visit to India. The report reads as follows:—

To the Rivers Committee of the Corporation of the City of Manchester.

Gentlemen,—Knowing that you are desirous of having a preliminary report from us with reference to the purification of the sewage of Manchester, we beg to inform you that since entering upon this inquiry in June last we have not only visited a number of sewage works presenting features of novelty in different parts of the country, but that we have also instituted experiments of our own with a view to determining the best mode of dealing with the sewage of Manchester so as to obtain an effluent of sufficient purity to comply with the requirements of the Mersey and Irwell Joint Committee.

THE BACTERIAL SYSTEM COMMENDED.

Our inquiry has already reached such a stage that we are able to say without hesitation that from the results obtained with the double contact beds constructed according to our instructions at Davyhulme by your City Surveyor, and the experiments carried on by us, which have been directed to the treatment and purification of settled and crude sewage without the use of any chemicals, we are of opinion that the bacteriological system, notwithstanding the particular nature of the Manchester sewage, will purify that sewage and will yield an effluent which will comply with all the requirements of the Mersey and Irwell Joint Committee, and which, when discharged into the Manchester Ship Canal, will, in our judgment, be the means of greatly improving the waters of the latter.

We must point out that further time is now required for us to determine as carefully as possible by experiment the precise form and details of the method which will be the most suitable to carry out works on such a large scale as will be required at Manchester, so as to make the proposed works a complete success.

We should like to say that every request for experimental plant and other facilities which we have made to you has been promptly complied with to our entire satisfaction, and that the large amount of analytical work which our experiments have necessitated has been most efficiently carried out by Mr. Gilbert J. Fowler (your chemist) and his staff of assistants.

We are anxious to express our sense of the value of the assistance of Sir Henry Roscoe's experimental filters, constructed and worked for some time under the direction of Mr. Scudder, for treating the tank effluent. We also think it desirable that the reports of Mr. Fowler, showing the progress which has been made in the purification of the sewage during the period the experiments have been going on, should be appended to our report.—We remain, gentlemen, your obedient servants (signed) BALDWIN LATHAM.
PERCY F. FRANKLAND.
W. H. PERKIN, JR.

The following is the chemist's addition to the report of the experts:—

PRELIMINARY REPORT ON DOUBLE FILTRATION EXPERIMENTS.

The construction of these filters was practically completed by September 9th, but till the end of the week (September 14th) the time was chiefly occupied by preliminary measurements of capacity. It was found that the filters, when the material was dry to commence with, each held 5,688 gallons; after the material had become thoroughly soaked it held only 5,000 gallons. The working capacity of each filter was therefore taken to be 5,000 gallons.

During the week ending Sep tember 21st each filter was filled once a day with settled sewage, the time of filling varying on different days. From week ending September 28th to October 26th each filter was filled twice a day, the sewage generally being in one case early morning sewage, in the other case afternoon sewage (1-2 p.m).

The method of filling and sampling the filters is as follows:—The sewage is allowed to flow from the sewer into the small settling tank one hour before the commencement of filling the coarse filter. The small settling tank usually takes about one hour to fill up to a mark on the side. When the settling tank is full the valve communicating with the coarse filter is opened, and the filter allowed to fill under a constant head of water. This is obtained by allowing the sewage to flow through the settling tank during the three-quarters of an hour taken in filling the coarse filter Any excess of flow passes by means of a slightly opened penstock into No. 1 precipitation tank. The sewage running on to the filter may be taken to be a mixture of 1¼ hours' sewage,

After remaining one or two hours, according to circumstances, on the coarse filter, the partially purified sewage is allowed to flow on to the final filter, on which it remains for a further period of one or two hours Each filter takes three-quarters of an hour to fill, and three-quarters of an hour to empty. Samples are taken every five minutes during the three-quarters of an hour, and the sample analysed is a mixture of these.

The results of the working of the filters are shown in the accompanying tables. It will be seen that as the beds become more matured the results improve. This is evident from the increased production of nitrates in the final filter, and the diminished tendency to putrefaction, as indicated by the difference between the three minutes' oxygen absorption before and after incubation, and by the proportion of samples undergoing even slight putrefaction.

EFFECT OF MANUFACTURING REFUSE IN THE SEWAGE.

The following substances have been definitely recognised in the sewage which has at various times passed on to the filter, viz.:—Iron pickling refuse, dye refuse, carbonic acid, and sulphocyanates. The iron pickling refuse (originally ferrous chloride) is completely oxidised on passing through the filters, some hydrated oxide of iron remaining in the filters.

Dye Refuse.—The colour is to a large extent, though not completely, discharged.

Carbolic Acid.—This appears to be oxidised in the filters.

Sulphocyanates.—These compounds are destroyed in the filters.

In no case has the presence of manufacturing refuse shown a marked tendency to render the purification less effective. In presence of the various substances above mentioned, purification of the sewage still goes on, and there has also in many cases been a considerable production of nitrate, though it is probable that with purely domestic sewage the yield of nitrate would be larger. It is worthy of note that from the first there was a destruction of free ammonia in the filters; in the case of the other filters at work at Davyhulme, this was not observed for some time after the start. The hot weather at the commencement of the double filtration experiments may partly be accountable for this result.

CLOGGING OF FILTERS.

With reference to the question of clogging, but little can be said with certainty. A remeasurement of the capacity of the coarse filter at the end of the period of working considered in this report, showed that it has lost about 200 gallons, or four per cent. of its capacity.

Too much importance should not, however, be attached to this measurement, as the material had consolidated somewhat in the filter, and some alteration in capacity may thus have taken place. The fact, however, that iron hydrate and inorganic suspended matter is retained in the filters renders it likely that diminution in capacity will take place. Its amount and character (e.g., whether chiefly in the top layer or throughout the body of the filter) cannot yet be definitely decided.

Gilbert J. Fowler.

November 5, 1898.

December 7, 1898.

Since the date of the above report, more work has been put upon the filters. From October 29 to November 16, they were filled three times a day with settled sewage, and from November 17 to the present they have been filled once a day with settled sewage and twice with crude sewage.

With few exceptions the purification has been satisfactory, and still show signs of improvement, as shown by the analytical results quoted

With reference to the question of clogging, referred to in the last paragraph of the report, recent measurements taken by me of the Roscoe filters at Davyhulme have shown that no loss of capacity has taken place in the cinder filter since the beginning of 1898, and the capacity of the coke filter has also remained unchanged since June, 1898.

The chemical efficiency of these filters has at the same time improved.

Gilbert J. Fowler.

SEWAGE DISPOSAL AT LEEDS.

BACTERIAL EXPERIMENTS WITH INDUSTRIAL SEWAGE.

FOR some time the Leeds Corporation has been endeavouring to discover a process for the treatment of their sewage, and last September they sought the advice of Mr. Dibdin. Acting upon his suggestions, a coarse bed and a fine bed were constructed, each of about one-eight of an acre area. The coarse bed was filled with coarse coke not less than 3in. diameter, and the fine bed with coke not less than 3-16in. diameter., and not more than 1½in. diameter. The floors of the beds are paved with old bricks grouted with cement, and are formed with a fall to the outlet end of the beds. Upon them are laid 3in. agricultural tile drains 2ft. apart, connected at their low ends with a brick collecting drain, which conveys the drainage to the outlet valves.

The sewage was first turned on to the beds on October 2nd, 1897. Absolutely crude sewage was used, and the beds were worked in this way for four months. The amount of purification shown by the final effluent after the beds had become established is considered satisfactory, and proves that, notwithstanding iron liquor and other trade effluents mixed with the sewage of Leeds, it can be treated on bacteria beds so as to produce a really good effluent. The effluents from the fine bed had no smell, except at times a slight earthy odour. The first flow was always cloudy, and in some cases turbid, but it cleared more or less according to the varieties of sewage being treated. The latter part of the flow was always very clear.

In order to make a physiological test of the effluent some carp were put into the effluent basin. More than half died within a month, but this was apparently due to the rush of the effluent carrying them against the outflow grating. Provision was then made to protect the fish from the full pressure of the rush, and the three carp that were living at the time this was done are still alive, having been continuously in the effluents, good and bad, which have passed through the basin for a year.

FILTRATION OR BACTERIAL DECOMPOSITION?

Good results having been obtained in the final effluent it remained to consider whether the beds were really digesting the large quantity of suspended matter brought down in the sewage, or whether this was accumulating in the beds. The gross capacity of the rough bed is 174,800 gallons, and the net or liquid capacity after filling in the coke, is estimated to be 83,300 gallons. When the beds were considered to be in good working order a careful measure of capacity was made, which showed that the rough bed had been reduced to 63,400 gallons. From the analysis of a large number of samples of crude sewage taken daily for two and a half months (October 2 to December 15, 1897), it appears that the average amount of matter in suspension in the crude sewage of Leeds is 37 2 grains per gallon. The analysis of the effluent from the rough bed during the same period gave 11·9 grains per gallon as the amount of solids in suspension, so that 25·3 grains per gallon were kept back by the rough bed. Chemical changes set up by allowing the beds to remain empty for a fortnight were found beneficial, and the experiment points to the possibility of treating the crude sewage and consuming the sludge if periods of rest are provided, say two weeks out of five in winter, and one week in four in summer.

Experiments with screened sewage were begun on March 4th of the present year. Considerable trouble arose from the large volumes of strong dye which came down pretty regularly at about the time for filling the beds. The dye discolours the whole volume of the sewage, and occasionally astonishing volumes of foul trade effluents have to be dealt with. In one recent instance a large quantity of what was apparently printing ink actually choked up the pumps. It will be necessary, the report continues, to maintain a systematic inspection of the trade effluents flowing into the sewers, with a view to their regulation. It is possible that in some cases the flow is the result of waste unnoticed by the manufacturers themselves. The experiments with screened sewage were carried on for six months, from March 4th to September 8th, with seven days' rest from April 27th to May 4th, and an enforced rest of 38 days from June 16th to July 25th. The number of fillings during the whole period was 315. The average of the fillings was 46,000 gallons, and the total passed over the bed during the six months was 14,490,000 gallons; and after making allowances for the solids screened off, it is estimated that about 51,000 gallons of sludge were retained by the rough bed. The capacity on March 2nd was 52,100 gallons, and on September 8th, 41,000 gallons; net loss of capacity, 11,100 gallons. Deducting this from the estimated amount of 51,100 gallons retained by the rough bed, we have 40,000, or about 80 per cent., as the amount of sludge consumed in this period by the rough bed. The fine bed retained 16,700 gallons of sludge, the whole of which was consumed, the capacity of the bed not having been decreased. The total consumption by the two beds was 56,700 gallons of sludge. The effluent from the fine bed during the six months, except for the first fortnight after the long rest, and during the heavy flow of dye, continued satisfactory.

After referring to experiments with settled sewage, some general observations are made on the biological experiments. It is pointed out that the

ACTION OF THE BACTERIA BEDS

give something beyond mere filtration, namely, a chemical action upon the organic matters in solution, and evidently a much greater purification than is represented by the mere withdrawal of suspended matters; and in addition it digests the organic solids left behind, a process which, if incomplete, can probably be completed by adequate periods of rest. The effluent from precipitation with or without lime is known to give rise to decomposition and putrefaction. The effluent from the bacteria beds improved on keeping, and in no case did subsequent putrefaction arise. From the experience gained during the year from treating Leeds sewage on bacteria beds it was found that the effluents were much superior to those from lime precipitation, and superior to those obtained in some cases from land filtration. They were proved capable of sustaining the life of coarse fish for a long period, and showed no signs of putrefaction on keeping. Their chemical analysis gives results which are generally well within the limit of one grain per gallon oxygen absorbed in four hours, and 0·1 grain of albuminoid ammonia, which has in recent years been generally accepted as a provincial standard of purity for effluents going into a stream not used for drinking purposes. [Mersey and Irwell Joint Committee's standard.—Ed. *C. T. J.*]

Dealing with the extension of the experiments authorised by the City Council in June last, the report states that new beds are being constructed, and clinkers from the destructors are being used instead of coke. It is proposed to make a series of trials with different volumes of sewage, with sewage under different conditions as regards matter in suspension, with different periods of rest, with filtering of material of different sizes, and with varying arrangements as to drainage, etc. The question is raised as to whether an experiment should not be made without delay to ascertain the effect of the sceptic tank treatment for the destruction of the solids in suspension; also to see how far an open septic tank, or upward septic filtration through coarse material, covered with a layer of sand, would be effective in destroying the sludge, and so far relieving the filter beds.

THE OUTCOME.

Experience in Leeds shows that either a first filtration or a septic tank, or both, must precede the fine bacteria bed. Intermittent flow and intermittent aeration are also necessary.

The Chemical Trade of Ancona.—The imports of sulphates, acids, and oxides from Great Britain largely increase every year. From 926 tons in 1896, the quantity imported during 1897 amounted to 1,500 tons. The total imports of these articles amounted to 3,622 tons, of which 2,122 tons were received from Austria-Hungary, Germany, and Belgium, and the remainder from Great Britain. From 350 tons of crude tartar exported during the year 1896, the exports to the United States of America, Germany, and Austria-Hungary increased to 882 tons. The exports of asphalte, food stuffs, building materials, sulphur, and crude tartar amounted to 37,000 tons, in comparison with 16,000 tons in 1896.

Legal Intelligence.

HIGH COURT OF JUSTICE.

CHANCERY DIVISION.

(*Before Mr. Justice Romer.*)

In re BUCKLEY BRICK AND TILE CO.

Mr. O. Leigh Clare appeared on Saturday last in support of a petition presented by this company, which carries on business at Buckley, near Hawarden, Flintshire. He said the petition asked for the reduction of the capital of the company, and the company wished to have the opinion of the court as to whether what they had done was a repayment of capital. The company was one established for the purpose of carrying on a brick and tile business. In the year 1894 the company passed a resolution, under the Companies Acts, giving itself power to reduce its capital by a special resolution. The capital of the company was £20,000., divided into 800 shares of £25. each, and in November, 1894, the company passed a resolution that the capital be reduced to £16,000., divided into 800 shares of £20. each. All the shares that were issued were fully paid-up, and the proposed reduction did not involve the diminution of any liability. What had been done was this: The resolutions were passed in 1894. At the end of that year there was a profit—that was to say, the stock and sales more than covered the expenses, and left a profit of between £2,000. and £3,000 The company in general meeting then declared a dividend; but also in pursuance of the resolution of November, 1894, they paid to each shareholder £1. out of the surplus. The company did the same thing in the years 1894, 1896 and 1897, with the result that the company had then paid to each shareholder the sum of £4. What the company thought they were doing was not only to pay a dividend but also to pay to each shareholder a bonus which was taken in reduction of the amount paid up on his shares. They treated each shareholder from 1894 as having a reduced amount in the company.—Mr. Justice Romer: Then they did repay capital.—Mr. Clare said they paid off £1. each share each year, and they thought they were paying it off out of profits. It made a difference to creditors whether they were to proceed on the assumption they were not repaying capital, or on the assumption they were.—Mr. Justice Romer: You ought to proceed on the assumption that you are paying capital.—Mr. Clare then asked that the petition might stand over, and that he should have leave to amend it.—Mr. Justice Romer: Quite right; amend the petition.

THE UNITED STATES SUGAR CROP.

FROM New Orleans it is stated that the Louisiana sugar crop is proving disappointing. Fully one-half the grinding season is over, but the results have not so far been encouraging. The tonnage of cane is heavy, but the yield of sugar is comparatively poor, and complaints on this score are general. This is the more disappointing as the sugar factories are now equipped, it is said, with the very best machinery for extracting the sugar from the cane, and it is, therefore, other things being equal, now possible to secure a higher yield per ton than ever before. Experts, it is said, are confessing themselves puzzled by the condition of the crop. "There is a general belief," the New Orleans *Picayune* remarks, "that the existing conditions are primarily traceable to the drought during the early months of the growing season. This so delayed the crop that at the commencement of the harvest the cane was fully a month behind in point of maturity. The weather which has been experienced since the commencement of grinding has been anything but favourable to the maturing of the crop, there being too much rain. The rains have also made plantation operations difficult, owing to the bad roads and the obstacles in the way of economical field work. Should the weather from now on prove cold and dry, it is possible that better results may be obtained; but it must now be accepted as certain that the yield of sugar per ton of cane delivered at the mill will be surprisingly small compared with the yields of recent years. This is greatly to be regretted, for the reason that a much larger crop than usual was planted for, and there was every reason to expect a heavy yield. The tonnage is heavy enough, but it is poor in sugar. Fortunately for the planters, the market is firm and sugar is selling at satisfactory figures. This firmness in the market will in some degree compensate producers for the failure of the yield to reach expectations. From all indications the poor quality of the cane is not confined to certain districts, but is general, thus confirming the impression that the trouble is due to the early drought."

MESSRS. BLACKWELL & CO.—We learn that Messrs. Blackwell & Co., Leadenhall House, London, E.C., mineral and chemical merchants, have been successful in securing the Government contract for the supply of French chalk, which is one of the firm's specialities.

Correspondence.

*** *We do not hold ourselves responsible for the opinions expressed by our correspondents.*

MOLYBDIC ACID.

(*To the Editor of the Chemical Trade Journal.*)

SIR,—I notice in your last issue an inquiry concerning molybdenum. I am interested in molybdic acid, and if any of your readers replying to the query of your former correspondent would help me with information concerning the users and uses of this acid I should be greatly obliged.

Yours, etc.,
MOLYBDIC ACID.

SULPHIDES REDUCTION (NEW PROCESS) LIMITED.

TRIALS AT THE WELSH WORKS.

THE directors of this company in their report, just issued, state:—Although you have been informed from time to time of the progress of this company, we may remind you that up to January of the present year we continued at the premises at Blackfriars the work initiated by the syndicate, which entailed considerable alterations and additions to the plant there. It then became necessary to carry on operations on a larger scale, for which purpose these works were inadequate. We therefore in January of this year secured more extensive premises at Llanelly (South Wales), where Mr. Ellershausen has been able to develop the process to its present state. We have recently carried out an extension and remodelling of the plant at these works on the latest approved plans, and we anticipate that work will be resumed before the end of the present month. These works, however, must be considered as only pioneer to a much larger installation contemplated to operate the process in Great Britain by a new and separate company. The French patent rights for your process have been sold to a French syndicate for a quarter interest therein. That syndicate holds rights over the most extensive known deposits of complex sulphide ores in France, and which are said to be practically inexhaustible. These important properties are situated in the Charente district, and fuller particulars concerning them will be given to you at the general meeting. The works of the French syndicate are in course of construction, and should be in operation within the next two months. As soon as possible after this, it is the intention of the French syndicate to register a large company to adequately work the French mines and patent rights in France, whereby our company will of course benefit in proportion to its interest in that syndicate. These French ores have already been most satisfactorily treated at your works at Llanelly, and found to be of a kindlier nature than the sulphide ores from the various Broken Hill mines, which have been so successfully dealt with by this process. There are several small parcels of ore and tailings at our works awaiting treatment. One lot of ore is from the Broken Hill Central Mine (Sulphide Corporation), and is similar to previous ores from that property dealt with at your works. A portion of the said tailings (also from that mine) has already been treated at Llanelly with conspicuous success There is *en route* to the works a consignment of French ore to follow a previous parcel sent over as a trial. And, further, 100 tons of sulphide ore are being sent from the Mount Reid Company's mines in Tasmania. This in itself is an important feature, in that the Mount Reid Company are sending it to our works to be treated at their own expense in order to test its value by our process. The policy of your directors in regard to the management of the affairs of this company at present is that, wherever applicable, they will separately sell the rights for using the process for the different countries to subsidiary companies for a large interest in each of them, and already important negotiations are being conducted by your board in this connection. The present, or parent, company would remain intact, and thus, benefiting by all subsidiary contracts, distribute its income as dividends to the holders of its shares. As we progressed in the development of the process, it was necessary from time to time to take out patents to cover the various improvements effected, but we are pleased to say that all these are now embodied in a final patent recently taken out, and which has been settled and approved by leading counsel on the subject. Your directors cannot conclude this report without expressing their highest appreciation of the indefatigable exertions of Mr. Ellershausen throughout, to whose perseverance, energy, and skill the present satisfactory position of the company is mainly due. The annual meeting will be held on January 12th, 1899.

Trade Notes

The Reported Rubber Combination.—The opinion entertained in London as to the reported association of rubber manufacturers formed in Manchester is generally adverse [See last issue.—Ed. *C.T.J.*] The public scarcely realises the extent of German competition or the importance of the strides made on the Continent in the processes of manufacture. Nor is it possible to remain blind as to the influence of America upon the colonial markets of Great Britain. There is a large importation of United States rubber goods into the Cape Colony and Australia, as well as India, and indeed it would certainly be found on a census that there are more German and American cycle tyres in the Far East than British, bearing in mind the fact that machines made in Japan are largely tyred from the States. One of the largest German factories took the opportunity to dispatch recently to the mercantile world of London, natty boxes of samples representing their qualities of rubber sheeting and tubing. Their activity seems to show that they regard the present moment as an opportune one to make a fresh bid for the foreign trade.

Change of Address.—We are informed by *Dr. J. Lewkowitsch* that he will close his offices and laboratories in Manchester from the 21st of this month, after which date his address will be 35, Queen Victoria-street, London, E.C.

American Items.—The Riverside Chemical Manufacturing Company, of Detroit, Mich., has filed articles of association. The capital is £1,000. The stockholders are Henry L. Page, James A Coe, Harry B. Page, and Louis J. Bureau.—The stock of the Hartford Chemical Company has been purchased by New Britain, Conn., capitalists, and the business will be moved to that city. The New Britain men, who are interested in the deal, are: H. T. Walker, C B. Stanley, F. H. Ilvord, G. W. Andrew, and W. E Hine.

Foreign Competition and the Metric System.—The Decimal Association, of Botolph House, Eastcheap, London, call our attention to the report of the Board of Trade Special Commissioner on the trade of the Argentine Republic, in which he remarks: "The want, in Great Britain, of the use of the metric system, which is the basis of the great bulk of first hand business here (the Argentine), is undoubtedly a great drawback to British trade, especially in estimates for engineering work, and such like." This is but another instance of the urgent need for adopting the metric weights and measures, and Chambers of Commerce and other commercial bodies might well grow impatient at the delay of the Government in carrying out this much desired reform.

Fire at an Oil Works. About four o'clock on Saturday afternoon flames were seen to arise from the depôt of the Crichton Oil Company, Dairycoates, Hull, close to the North-Eastern Railway and the William Wright Dock. From this dock to the oil company's premises pipes are laid by which the oil is pumped from steamers lying alongside the quay. A slight leakage in these pipes is believed to have caused oil to gather on the surface of a small drain. This is supposed to have been ignited by a lighted match being thrown into the drain. The fire was seen to spread rapidly towards the works, and soon a bridge which crossed the yard was in flames. The reservoirs in the works contained hundreds of thousands of gallons of oil, and the fear was that the flames might reach these reservoirs. The police were quickly on the spot with their appliances, and so energetically did they work that they put out the fire before the reservoirs were reached. Considerable damage was done, as some rails and telegraph poles on the Hull and Barnsley line were destroyed.

Canadian Oil for Manchester.—It has been repeated on many occasions that the Standard Oil Trust of the United States had secured control of the oil wells of Canada, but it is pleasant to be able to record that such is not the case. For a considerable time a number of Englishmen connected with the oil trade have been trying to secure rights to develop the oil wells, so that in case of international trouble England should not be placed at a disadvantage with regard to her oil supply. The district of Gaspe, in the Dominion of Canada, on the Atlantic coast of Canada south of Newfoundland, is claimed to be one of the finest oil-bearing regions in the world (*C.T.J.*, 542, p. 226.), and during the past few years the Petroleum Oil Trust, Limited (British), have been developing the wells; but recently the Irish Proprietary Oilfields of Gaspe (Canada), Limited, and a Belgian company purchased rights from the British company, and between twenty and thirty oil-bearing wells have now been sunk upon the property. The control of the whole supply of these wells, with the sole right of laying pipe lines over all the properties to the harbour and wharves at Gaspe, which, together with all the land intervening, is owned by the Petroleum Oil Trust, have just been acquired by Mr. W G. Bagnall, of Manchester, with in addition the sole right to refine oil on the estate, to sink wells and to build refineries.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are firmer, and show a little more activity at 9d. for loc 90's and 50/90's. Carbolic acids are unchanged. Solvent naphtha firm at 1s 2d. Creosote keeps strong and in good demand. Pitch steady at 24s. 6d. f.o.b East Coast, and 22s. 6d. West Coast.

Sulphate of ammonia has enjoyed an active market for the time year, although there has been no relaxation in prices. On the contra the market closes very firm, with London outside makes £10. 2s. 6d. Liverpool, Hull, and Leith, £10 2s. 6d., all prompt. For forwar £10. 5s. is asked at Beckton and the North.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business continues fairly good, both for ho trade and export. In bleaching powder there is no change as rega price, considerable business having already been done over 1899 home trade at £4. to £4. 2s. 6d., f.o r.; for export, £5. 5s. to £5 hardwoods, f.o.b. Liverpool. Prices for chlorate of potash and so remain steady. Ammonia alkali firm at £4. 2s 6d., bags f.o.r., contracts over 1899, £3. 17s. 6d. per ton. In crystals and bicarbona there are no alterations of prices. Caustic soda is fairly active, considerable business has been done over 1899 at lower prices; curr spot quotations are:—f.o.b. Liverpool, 77 % £7 12s. 6d., 74 £7. 7s. 6d., 70 % £6. 17s. 6d., 60 % £5. 17s. 6d. net per t Salt cake is firm at 25s. to 26s. per ton in bulk, f.o.r. makers' wor In vitriol and muriatic acids prices are maintained, both prom and forward. Sulphur firm at £4. 12s 6d per ton. Sulphate copper dearer at £18. 10s. per ton, prompt and early delivery, a £18. 15s. for January-March. Brown acetate of lime firm £5 7s. 6d., c.i.f.; grey, £7. 15s. per ton. White sugar of le and nitrate of lead are only in limited request, but prices unchanged. Acetate of soda firm at £12. 5s., c.i.f. In acetic a there is a moderate amount of business doing, and prices are fir Potash, caustic and carbonate are in good general demand, and witho alteration in value. Carbonate, 90%, £14. 10s. to £14. 15s., ex shi caustic, 90%, £22. 5s. per ton. White powdered arsenic is firm owi to considerably reduced stock, and prices rule from £16. to £16. 1 per ton, according to brand. Ammonia salts all round are firm, sympathy with sulphate. Nitrate of soda is strong at 7s. 6d. p ton., f.o.r.

REPORT ON MANURE MATERIAL.

The market is rather quiet but prices are firm for all descriptions material.

United Kingdom buyers have scarcely made up their minds to p the prices required for high grade phosphates for their 1900 seaso requirements, but Baltic and Continental buyers are still operating. South Carolina river rock 6d. per unit would be accepted, in cargo to good U.K. ports, 1899 shipment, but a ¼d. per unit more is requir for 58/63% Algerian, July/Dec. 1899 shipment.

River Plate bones would readily fetch £4. 15s. per ton delivered go U K. ports, but in the absence of cargoes offering there is nothing report. East India bone meal is firmly held at £5. 2s. 6d. to £5. 3s. per ton, ex quay, Liverpool, Jan/Feb shipment, and up to £5. 5s ton has been paid for special quality, ex quay Liverpool.

Nitrate of soda is firm at 7s. 6d. per cwt. for ordinary, and 7s. for fine quality.

There is good inquiry for dried blood and full prices would be pai but there is none offering for early delivery.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is but sparingly offered, and the inquiry is fai active. Benin has been done at £18. 15s. The market closes stea Olive is in better demand, and prices are well maintained. Linseed firm at the slight improvement, Liverpool makes being quoted 17s. to 18s. 6d. cwt. in export casks. Cottonseed firm at 15s. 3d. to 15s. for Liverpool refined. Castor oil firm; good seconds Calcutta been done at 2⅛d. ex quay, 2⅜d. store, and 2¼d. March to Ap shipment. There are sellers of first pressure French at 2¼d.; Madr 2⅝d. per lb. Tallow firm and in good demand, with North Americ on the advance. Resin is still in good request at full prices. Spirits turpentine very firm, and for spot sellers ask 31s. 9d. to 32s. Petroleum steady; American, 6⅝d. to 8d., and Russian refined, per gallon.

CAKES.—There is only a poor trade doing in all imported descr tions of linseed, but values are without any material change £6. 15s. to £7. for American Western on the spot, £7. 2s. 6d.

£7. 3s. 9d. for River Plate, usual terms, £7. to £7. 2s. 6d. for Bombay, and £7. 10s. per ton for Russian, nett cash, the latter being in rather limited supply. Liverpool makes are also rather quiet, but the recent quotation is steadily maintained, with sellers still quoting £7. 15s. to £8. 15s. per ton, according to brand. Good to choice brands of American decorticated cottonseed are in rather better request, at recent rates, viz., £5. 15s. to £6., according to quality, and moderately fair sales are passing in Liverpool makes at £6. 7s. 6d. to £6 15s. per ton, according to brand. There is a very good consumptive business doing in Liverpool undecorticated makes at fully recent quotations, the range of values being now given at £4. 5s. to £5. per ton, according to brand. Prime quality Egyptian on the spot continues in only limited supply, and sellers remain firm, with £4. 5s. per ton still given as the nearest value.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Business here causes many indications of the near approach of holidays and the close of a financial year. No doubt many firms would be in pocket could they escape the "bonus" levied by way of presents; others are busy concluding contracts, whilst others are desirous of imitating them, involving plenty of work, the results of which must be for another year. The boom in turpentine has been rapid and consistently upwards, having advanced about £11. per ton within about four months; how much the result of the rigging of the market would be best left unsaid. Yet the results must have proved highly satisfactory to those within the "know." It would be more generous to ascribe the rise to scarcity. Linseed oil closes better and seed is firmer. Cottonseed oil is quiet, whilst seed is firm. Linseed oil is quoted spot 15s. 4½d. to 15s. 6d. naked; forward January to April, 15s. 7½d.; May to August, 15s. 9d.; boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oil quiet; spot naked, 12s. 6d.; forward, January to April, 12s. 9d; May to Aug., 13s. 4½d, Crude ditto spot 11s. 6d. naked; casks, £1., and ordinary barrels, £1. 10s. per ton extra. Castor oil, extracted here, pure pharmaceutical, cold drawn, 29s. per cwt. in barrels, 3¾d. per lb. in cases; firsts, 27s. in barrels; seconds, 26s in barrels. Oleines £17. to £19. per ton. Turpentine anywhere about 31s. Olive oil, £32. to £33. 10s. per tun. Olive oil soap, £16. to £18. per ton. Resins firm and unchanged. Cod oil, £16. to £18. per ton.

CAKES.—Linseed cakes a firmer feeling, 95% pure, £8. to £8. 2s. 6d.; seconds, £7. to £7. 2s. 6d.; Russians, £7. 7s. 6d. to £7. 12s. 6d. Cottoncakes a better tone; best makes, £4. 7s. 6d. to £4. 10s. per ton; seconds, £4. 5s. to £4 7s. 6d.; decorticated, £6. 7s. 6d. to £6. 10s. Rape cakes, Black Sea, £4. to £4 1s. 3d; East Indian, £5. 7s. 6d. to £5. 10s. per ton.

PAINTS.—Very little more than preparatory business moving, with a few inquiries for export. Prices are unaltered, with the exception of varnishes, which have all advanced by 3d. per gallon, owing to the price of turpentine.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Although there is no great bulk changing hands, the feeling in sulphate of ammonia remains wonderfully healthy and steady to a remarkable degree, when bearing in mind that, as a rule, this article is almost continually on the change. The figure for prompt f.o.b. Leith stands to-day as it stood a week ago, and for some time before that, viz., £10. It is very firm at that, however, and a few days ago £10. 1s. 3d. was paid for one parcel at least. There is nothing doing on the forward basis. The general market is very quiet, with prices in most of the lines unchanged. The deliveries in burning oil are now very large, although not quite yet at a maximum for the season. All the other products of the shale oil industry continue fairly strong at late prices. The Hermand Oil Company, whose works have for two or three years been closed because of the unremunerative prices, now talk of reopening.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £5. 17s. 6d., all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. nett, Tyne; saltcake, 26s. 0d.; borax, English refined, £14. 10s., and boracic acid, £25. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s.. nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £18. 5s. 0d. to £18. 10s. 0d. less 5% Liverpool; paraffin scale, hard, 1⅝d. to 1⅝d. per lb., and soft 1⅝d. per lb.; paraffin wax, 120° semi-refined, 1⅞d. to 2⅛d. per lb; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 0s., 885° £5. 10s. to £6. and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are unaltered and market quiet. Soda crystals are quoted at £2. 12s. 6d. per ton, gross weight, locally, and in good demand. Caustic, 70% £7. per ton, and 76/77% £7. 15s. to £8. per ton. Sulphur £4. 15s. per ton and scarce.

Bleaching powder, softs, £4. 15s. per ton, nett; do. hards, £5. 0s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The coal trade is steady with a good demand for best steam and gas coals. Coke is firm and higher prices still are being asked. To-day's quotations are as follows:—Best Northumbrian steam, 9s. 3d. to 9s. 6d. per ton; second qualities, 8s. 3d. to 8s 6d. per ton; small steam, 4s. 6d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. 3d. to 8s. 6d. per ton; household coals, 10s. to 11s per ton; coke, 18s. to 20s. per ton.

New Companies.

Arthur Holden and Sons, Ltd.—CAPITAL £20,000 in £10. shares. This company has been formed to acquire the business carried on by A. Holden, at 218 and 219, Bradford-street, at Warwick-street, and at Bordesley Green-road, Saltley, all in Birmingham, and to carry on the business of paint and varnish manufacturers and merchants, oil and colourmen, etc. The subscribers to the memorandum of association are:—A. Holden, 218 and 219, Bradford-street, Birmingham, varnish manufacturer; F. S. Pearson, 57, Colmore-row, Birmingham, solicitor; A. L. Matthison, 7, Durham-road, Birmingham, traveller; P. M. Sturge, 17, Frederic-road, Birmingham, traveller; B. C. Holden, Woodside, Knowle, near Birmingham, warehouseman; T. B. Parker, 258, Stratford-street, Sparkbrook, clerk; W. S Jacombs, 79, Colmore-row, Birmingham, chartered accountant. Registered office, 218 and 219, Bradford-street, Birmingham.

Heyse, Ltd.—CAPITAL £20,000., in £5. shares. This company has been formed to acquire, own, and work certain inventions, trade marks, and contracts, for manufacturing soft and hard soap, soap powder, cleaning and polishing paste, granulated soda, etc., and to adopt an agreement with R. Heyse.. The subscribers to the memorandum of association are:—F. Martin, Granville House, Arundel-street, W.C., accountant; R. H. Watkin, Exning Villas, Church Hill, Loughton, law student; W. J. van Hoytema, 142, Fleet-street, E.C., printer; S. Robidoux, 38, Finsbury Circus, E.C., clerk; G. H. Peake, Woodridings, Pinner, Middlesex, clerk; S. W. Money, 31, Lombard-street, E.C., secretary; R. Heyse, 427, High-road, Gunnersbury, merchant.

London Fish, Oil, and Guano Co., Ltd.—CAPITAL £15,000. in £1. shares. This company has been formed to acquire for the City of London, and within a radius of 10 miles from Charing Cross, an exclusive licence to manufacture in accordance with the Stanley process, fish oil and fish guano, and to adopt an agreement with the Leinster Contract Corporation, Ltd. The subscribers to the memorandum of association are H. G. Clarke, 316, Uxbridge-road, W., clerk; W. E. Dunning, 43, Ampthill-square, N.W., clerk; C. E. Lewis, 31, New-street, St. John's Wood, clerk; F. W. Cobham, 74, Hollydale-road, Peckham, clerk; J. J. Henley, 144, Heath-road, Clapham, S.W., clerk; A. Durham, 1, Josephine-avenue, Brixton-hill, S.W., pharmacologist; H. H. Croft, 133, Elderfield-road, Clapton-park, N.E., clerk. Registered office, 16, St. Helen's-place, E.C.

Roumanian Oil Exploration Co., Ltd.—Capital £100,000. in £1. shares. This company has been formed to adopt an agreement with the International Trustee Assets and Debenture Corporation, Ltd., and to acquire, own and work any petroleum or oil-bearing lands in Roumania, or elsewhere. The subscribers to the memorandum of association are:—F. H. Goodwin, Dynevor-road, Stoke Newington, N., clerk; J. A. Fuller, 50, Chatterton-road, Finsbury Park, N., gentleman; H. W. Brown, 79, High-street, Beckenham; E. T. Church, 54, Geneva-road, Brixton, S.W, clerk; J. M. Lickfold, 33, Brunswick-square, W.C., journalist; H. Wyatt, Bangor House, Lausanne-road, Hornsey, gentleman; J. W. Honess, 35, Florence-road, Wimbledon, gentleman.

South Russian Oil Co., Ltd.—Capital £60,000., in £1. shares. This company has been formed to acquire petroleum properties and wells in Russia or elsewhere, to develop, work, turn to account and deal with the same, and to buy, sell, refine, reduce and prepare for market petroleum and other oils, and mineral substances. The subscribers to the memorandum of association are:—C. I. Saunders, 91, Athenlay-road, Nunhead, S E, merchant; W. F. Howard, 20, Bucklersbury, E.C., secretary; J. Clemence, Albert Gate Mansions, S.W., Merchant; W. D. Frost, junr., 35, Broad-street, E.C, merchant; W. Rowley, 24, Geddes-road, Wandsworth, S.W., clerk; C. G. W. Wingate, 40, Iverson-road, N.W., accountant; H. R. Howard, 31, Rectory-road, Stoke Newington, clerk.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
Week ending December 10th.

Acetic Acid—

Holland,	52 pks.	A. & M. Zimmermann
,,	150	R. W. Greeff & Co.
,,	10	F. C Devon & Co.
Belgium,	8	R. W. Greeff & Co

Acetone—

Holland,	2 dms.	R. W. Greeff & Co.

Alkali—

France,	575 c.	J. Harrison & Co.
Holland,	36	Becker & Wagner
Germany,	6	A. & M. Zimmermann
,,	42	Butler's Wf., Ld.

Alum—

Holland,	324 pks.	J. White

Ammonia—

France,	£30	Blagden, Waugh & Co.

Ammonium Phosphate—

Holland,	43 cks.	Brit. Non-Flammable Wood Co.

Antimony Ore—

Sydney,	9 t.	Tillery & Son
,,	12	L. & I. D. Jt. Co.
France,	6 c.	Girard Freres & Co

Arsenic—

Portugal,	£138	Coverley & Westray

Asbestos—

Italy,	£60	A. Laming & Co.
U. States,	593	J. D. Hewitt & Co.
,,	350	Deering & Robottom
,,	45	L. & I. D. Jt. Co.
Holland,	5	Robinson, Roberts & Co.

Barytes—

Germany,	19 pks.	J L. Lyon & Co.
Holland,	90	Taylor Brs.
,,	24	O'Hara & Hoar
,,	20	W. Harrison & Co.
Belgium,	36	Leach & Co.
,,	27	J. L Lyon & Co.
Germany	57	W. Harrison & Co.

Bleaching Powder—

France,	57 cks. £59	J. M. Steel & Co.

Bleaching Soda—

Germany,	£43	H. Lambert

Bone Meal—

E. Indies,	170 t.	A. Hunter & Co.

Bones—

Sydney,	9 t.	Anning & Cobb
,,	24	G. S. Yuill

Boracic Acid—

Italy,	20 pks.	J. Puddy & Co

Caoutchouc—

Mauritius,	3c.	Kleinwort, Sons & Co.
France,	27	Girard Bros & Co.
U. States,	27	L. & I. D. Jt. Co
Zanzibar,	110	,,
France,	60	Prop. Hay's Wf.
Straits,	177	Gilman Brs & Co.
,,	297	Huttenbach & Co.
,,	1,230	Jewesbury & Co.
,,	135	Anderson, Weber & Smith
B. Guiana,	1	Royal Mail Steamship Packet Co.
Germany,	24	Butler's Wf., Ld.
,,	50	W. M. Smith & Sons
Borneo,	45	Elkan & Co.
Straits,	75	W. Pope & Co.
,,	500	Soundy & Sons
,,	58	A. B. Curtis & Co
,,	61	Kaltenbach & Schmitz
,,	138	L. & I. D. Jt. Co.
Germany,	12	,,
Zanzibar,	16	Wallace Brs.

Carbolic Acid—

Germany,	24 pks.	Blagden, Waugh & Co.
,,	£220	

Castor Oil—

France,	20 cks.	F. Bochin
,,	12 brls.	C. S. Lovell
E. Indies,	30 cs.	Davy Hill, Son & Co.
Italy,	3	Potter & Clarke
,,	60	Love & Co.
Belgium.	20 brls.	Humphrey & Co.

Caustic Potash—

Germany,	41 dms.	J. M. Steel & Co.
,,	42 cks.	D. T. Domeier & Co.

Chemicals (*otherwise undescribed*)

Holland,	£15	R. W. Greeff & Co.
Belgium,	669	T. H. Lee
Sweden,	7	M. D. Co.
Germany,	602	A. & M. Zimmermann
,,	820	L. & I. D. Jt. Co.
Belgium,	44	John Cockerill Line
Germany,	90	Craven & Co.
Holland,	25	H. Lorenz
France,	143	Mory & Co.
Germany,	10	R. W. Greeff & Co.
,,	25	Butler's Wf., Ld.
,,	45	J. Norrenberg & Co.
,,	60	H. Lambert
Holland,	10	T. H. Lee
U. States,	506	H. Harkness
Germany,	12	Phillipps & Graves
,,	10	Dolenvaux & Bremner Ld.
U. States,	450	B. & F. Wf. Co., Ld.

Cream of Tartar—

Holland,	22 pks.	Kirkpatrick, Barr & Co
France,	9	C. Atkins & Nisbet
,,	5 cks.	J. W. Cook & Co., Ld.
,,	9 pks	W. C. Bacon & Co.
,,	2	W. Balchin, Ld.
,,	15	B. & F. Wf. Co., Ld.

Dyestuffs—

Cochineal

Canaries,	6 pks.	W. M. Smith & Sons
,,	2	Kuhner, Henderson, & Co.
,,	10	Swanston & Co.
,,	9	Sperling & Williams

Cutch

Borneo,	18 pks.	Prop. Hay's Wf.
Rangoon,	250	L. & I. D. Jt. Co.
Straits,	20	Anderson, Weber & Smith
Rangoon,	250	H A. Litchfield & Co.
,,	200	Hoare, Wilson & Co.
Belgium,	10	J. Harrison
,,	10	Freudentheil & Co

Extracts

Austria,	34 pks.	Fellows, Morton & Co.
France,	4	Gellatly, Hankey & Co.

Gambier

Straits,	351 pks.	R. G. Hall & Co.
,,	691	Union L. Co., Ld.
,,	1,111	Brown & Elmslie
,,	608	Brinkman & Co.
,,	1,514	Adamson, Gillfillan & Co.
,,	877	Beresford & Co.
,,	352	J. Swire & Sons

Myrabolams

E. Indies,	670 pks.	Baxter & Hoare
,,	620	L. & I. D. Jt. Co.

Saffron

Spain,	1 pk.	C. Brumlem & Co.

Tanners' Bark

U. States,	20 t.	Escombe Brs. & Co.
Natal,	57	Boutcher, Mortimore & Co.
Melbourne,	21	L. & I. D. Jt. Co.
Natal,	9	Flack, Chandler & Co.
,,	21	A. & W. Nesbitt
,,	63	J. T. Rennie, Son & Co.

Tannin

Austria,	100 pks.	Boutcher, Mortimore & Co.

Farina—

France,	213 pks.	H. Ewald & Co.
Holland,	150	R. Bennett & Co.
Germany,	50	J. Knill & Co.

Glucose—

Germany,	35 pks.	281 c.	Deering & Robottom
U. States,	1,004	1,024	L. & I. D. Jt. Co.
France,	200	200	W. E. Cole
,,	200	200	Proprs. Fenning's Wf.
Germany,	25	129	M. D. Co.
U. States	1	6	Page, Son & East
,,	1,050	1,300	R. G. Hall & Co.
,,	250	250	C. Thompson & Co.
,,	150	849	J. Keiller & Son, Ld.
,,	250	250	Beresford & Co.

Glue—

Germany,	£50	Phillipps & Graves
U. States,	49	Anglo-Am. Oil Co,
Austria,	150	M. H. Voss
,,	215	J. Barber & Co.
Germany,	300	Deering & Robottom
France,	130	D. Mangus
Holland,	18	Berriman, Keller & Co.
Belgium,	1,325	J. Barber & Co.
Germany,	150	O. Schmidt & Co.
France,	40	B. & F. Wf. Co., Ld.
Germany,	223	L. & I. D. Jt. Co.
,,	34	M. Dk. Co.
,,	54	Phillipps & Graves
Holland,	45	J. Barber & Co.
Belgium,	75	T. Ronaldson & Co.

Glue Stock—

Belgium,	10 bls.	Hicks, Nash, & Co.
N. Zealand,	6	T. J. & T. Powell
Germany,	85	J. W. Cook & Co., Ld.
France,	224	B. & F. Wf. Co. Ld.
Melbourne,	6	R. Brookes & Co.
Germany,	3	M. Benscher
Germany,	54	Hicks, Nash & Co.
France,	1	E. Flageollet & Co.
Sydney,	205	Anning & Cobb
,,	24	Goad, Rigg & Co.
,,	36	G. S. Yuill & Co.
,,	3	S. Barrow & Co.
,,	76	Flack, Chandler & Co.
France,	72	T. Tropp & Sons
Japan,	200	Lon. & Til. Ltge. C. & D. Co., Ld.
Germany,	85	W. Balchin, Ld.

Glycerine—

Holland,	£390	J. Barber & Co.
N. Zealand,	80	H. Hill & Sons
France,	320	J. W. Cook & Co., Ld.
,,	315	H. Hill & Sons

Gypsum—

Germany,	30 t.	Phillipps & Graves

Infusorial Earth—

Germany,	£250	A. Haacke & Co.

Lead Acetate—

Germany,	£32	F. Bochin
France,	12	Beresford & Co.

Magnesium—

Germany,	£30	Phillips & Graves

Manure—

Sydney,	6 t.	G. S. Yuill & Co.

Methyl Alcohol—

Germany,	30 dms.	W. I. Stuart
France,	17 cks.	E. Catlin

Molasses—

U. States,	50 cks.	300 c.	E. & T. Fink
,,	1,500	9,520	J. R. Francis & Co.
,,	250	1,318	Deering & Robottom
Holland,	1,000	4,782	J. R. Francis & Co.

Ochre—

France,	37 pks.	W. Harrison & Co.
,,	4	O'Hara & Hoar
Italy,	6	,,
,,	36	Burrell & Co.
,,	8	Colthurst & Harding
Holland,	11	Wilkinson, Heywood, & Co.

Paraffin Wax—

Rangoon,	1,260 bxs.	H. Hill & Sons
U. States,	6,284 brls. 111 cs.	Anglo-American Oil Co.

Phosphate Lime—

Belgium,	50 t.	H. & E. Albert

Phosphate Rock—

U. States,	2,492 t.	West & Penning

Pitch—

Germany,	50 cks.	H. Brown
,,	125 brls.	R. L. Archibald
Russia,	113	Ragosine & Co.

Platina Ore—

Russia,	2 c.	H. Grey, junr.

Plumbago—

U. States,	102 pks.	Lunham & Moore
Ceylon,	33 brls.	W. H. Sampson
,,	433	J. Thredder, Son, & Co.
,,	100 cks.	Doulton & Co.
,,	148	R. G. Hall & Co.
Germany,	5	H. Lambert
,,	66	B. Gallaway

Potash—

France,	60 dms.	Lon. & Til. Ltge. C. & D. Co.

Potassium Bicarbonate—

Holland,	9 cks.	A. & M. Zimmermann

Potassium Carbonate—

Germany,	100 c.	Beresford & Co.
,,	95	Petri Brs.
,,	196	H. Lambert
,,	200	A. & M. Zimmermann
France,	100	Petri Brs.
Canada,	320	Charles & Fox

Potassium Chloride—

Germany,	500 bgs.	Bessler, Waechter, & Co.

Potassium Oxalate—

Holland,	40 pks.	R. W. Greeff & Co.

Potassium Sulphate—

Germany,	500 pks.	Bessler, Waechter, & Co.

Pyrites—

Portugal,	2,789 t.	Mason & Barry, Ld.

Rosin—
U. States 1,150 brls. T. Nickels & Co.
Carrabell, 682 Prod. Brokers' Co.

Salicylic Acid—
Germany, 16 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 32 cks. L. & I. D. Jt. Co.
,, 50 pks. P. Hecker & Co.
,, 43 cks. J. Hall & Son
,, 4 T. H. Lee
,, 175 bgs. H. Grey, junr.
,, 350 S. E. Rly. Co.
U. States, 41 cks. Lon. & Til. Ltge. C. & D. Co.

Soap—
France, £80 Beresford & Co.
Holland, 48 Phillipps & Graves
U. States, 390 W. Dixon

Soda Ash—
Belgium, 1,260 c. R. Waters

Sodium Acetate—
France, 29 cks. E. Catlin
,, 30 pks. ,,

Starch—
Germany, 3,200 pks. Horne & Co.
,, 30 Phillipps & Graves
Belgium, 350 E. & T. Pink
,, 200 F. Claydon & Co.
,, 44 Leach & Co.
,, 85 T. H. Lee
,, 170 T. Ronaldson & Co.
U. States, 440 C. Tennant, Sons, & Co.
Canada, 300 R. G. Hall & Co.
,, 100 Ohlenschlager Brs.
France, 525 W. E. Cole
,, 525 E. & T. Pink
Holland, 41 Little & Johnston
,, 56 Hernu, Peron, & Co.
,, 35 Phillipps & Graves
Austria, 20 J. Barber & Co.

Stearine—
Belgium, 7 cks. H. Hill & Sons
,, 50 pks. Bennett S. S. Co.
U. States, 16 Lunham & Moore
France, 57 H. Hill & Sons

Strontia—
Holland, £30 J. Owen

Talc—
E. Indies, £216 W. M. Smith & Sons
,, 6 J. W. Cook & Co., Ld.
,, 448 E. Davis & Co.
,, 157 A. B. Curtis & Co.

Tartar Emetic—
Germany, £35 R. W. Greeff & Co.

Tartaric Acid—
Holland, 38 pks. B. & F. Wf. Co., Ld.
,, 12 Kirkpatrick, Barr, & Co.
France, 4 B. & F. Wf. Co., Ld.
Spain, 30 ,,

Turpentine—
U. States, 640 brls. Nickoll & Knight
,, 360 Prod. Broker's Co.
Russia, 53 D. Smith

Ultramarine—
Germany, 63 pks. Steinhoff, Sons, & Co.
,, 20 Thames S. T. & L. Co., Ld.
,, 22 Phillipps & Graves
,, 7 J. Barber & Co.
,, 13 W. Harrison & Co.

Varnish—
U. States, 43 pks. Atlantic Transport Co.
,, 3 A. E. Piggott
Belgium, 2 T. H. Lee
,, 5 Wilson & Co.
France, 15 Burnett Brs. & Sons
Germany, 10 Butler's Wf., Ld.

Verdigris—
France, 4 pks. B. & F. Wf. Co., Ld.

White Lead—
Germany, 47 pks. Wilkinson, Heywood, & Co.
,, 25 H. B. Alder & Co.
,, 80 Steinhoff, Sons, & Co.
,, 30 Roll & Co.
,, 8 Haeffner, Hilpert, & Co.
,, 23 N. J. Fenner & Co.
Holland, 20 J. R. Francis & Co.
,, 21 Perkins & Homer
Belgium, 19 J. L. Lyon & Co.
,, 60 T. & W. Farmiloe, Ld.
,, 10 G. E. Banes
,, 20 O'Hara, Matthews, & Co.
Austria, 9 T. Palmer

Wood Pulp—
Sweden, 160 pks. Alsing & Co., Ld.
,, 58 Henderson, Craig, & Co.
,, 21 Thames S. T. & L. Co., Ld.
,, 363 W. G. Taylor & Co., Ld.
,, 340 J. W. Cook & Co., Ld.
,, 320 Johnsen & Jorgensen
,, 2,560 Christophersen, Andrews, & Co.
Canada, 1,815 Becker & Co.
Norway, 1,300 W. G. Taylor & Co., Ld.
,, 448 Christophersen, Andrews, & Co.
,, 400 W. E. Bott & Co.
Belgium, 1,973 F. Heydemann
Holland, 150 A. E. Reed & Co.
Russia, 4,797 W. D. Cork

Zinc Oxide—
U. States, 800 pks. M. Ashby, Ld.
Germany, 35 R. W. Greeff & Co.
,, 50 Prprs. Dowgate Dk.
,, 149 M. Ashby, Ld.
,, 500 Soundy & Sons
Holland, 95 M. Ashby, Ld.
,, 5 J. L. Lyon & Co.
,, 50 J. Matton
Belgium, 10 H. Johnson & Sons

LIVERPOOL.

Week ending December 8th.

Acetic Acid—
Rotterdam, 10 bllns.

Barytes—
Antwerp, 66 cks. 170 bgs.

Benzine—
New York, 750 brls.

Borate of Lime—
Antofagasta, 2,621 bgs.

Carbolic Acid—
Rouen, 13 tins Co-op. W'sale Society, Ld.

Castor Oil—
Calcutta, 569 cs. Ralli Brs.
,, 400

Chalk—
Rouen, 2 cs. Co-op. W'sale Society, Ld

Chemicals (*otherwise unaescribed*)
Genoa, 20 bgs. Hughes
9 cks. & Chemery
Hamburg, 7 cs.
Rotterdam, 3

Chrome Ore—
Volo, 300 t. Geo. G. Blackwell, Sons & Co
Smyrna, 51

Cobalt Ore—
Rouen, 3 cs. R. J. Francis & Co.

Cottonseed Oil—
New York, 6 brls.

Cream of Tartar—
Barcelona, 3 pks. F. & L. Sitzler
Bordeaux, 27 cks.

Dyestuffs—
Argols
Bordeaux, 50 cks.
Patras, 1 cs.
Cutch
Rangoon, 250 bxs. Baring Brs. & Co.
,, 999
Extracts
Philadelphia, 60 brls.
New York, 125
Fiume, 320 358 bdls. Oak Extract Co.
Baltimore, 100 H. Rooke, Sons & Co.
Ghent, 1 ck.
Antwerp, 77 bgs.
Fustic
Vera Cruz, 719 pcs. Rosing Brs.
Kingston, 432
Myrabolams
Bombay, 1,570 bgs. D. Sassoon & Co.
Orchella
Coquimbo, 5 bls. Schintz & Co.
Valonia
Smyrna, 630 bgs. Prolopazzi Brs.
,, 498 Barry Brs.

Farina—
Fiume, 210 bgs.
Hamburg, 300

Glucose—
Dunkirk, 100 bgs.

Glue—
Rouen, 5 cks. Co-op. W'sale Society, Ld.
Fiume, 4
Antwerp, 5 bls.
Hamburg, 70 bgs.

Limestone—
Antwerp, 2 cs. J. T. Fletcher & Co.
Rouen, 1 crt. R. J. Francis & Co.
Antwerp, 1

Mercury—
Gijon, 100 flasks. Comp. Nat. de E. de P.

Mica—
New York, 10 brls. Houses Cement Co.
,, 12

Mineral White—
Fiume, 372 bgs.

Molasses—
Alexandria, 580 brls.

Naphtha—
New York, 7,765 brls.

Ochre—
Rouen, 57 cks. R. J. Francis & Co.

Paraffin Scale—
Baltimore, 300 brls.

Paraffin Wax—
Philadelphia, 500 brls.

Plumbago—
Genoa, 80 bgs.

Potash—
New York, 20 cks.

Pyrites—
Huelva, 3,132 t. Matheson & Co

Rosin—
Savannah, 5,370 brls.

Salt—
Hamburg, 5 cks. 5 cs.

Saltpetre—
Calcutta, 629 bgs. Ralli Brs.

Soap—
Constantinople, 1 bg.
Philadelphia, 1,325 pks.

Soapstone—
Bordeaux, 100 bgs. Geo. G. Blackwell, Sons & Co.
Genoa, 200 bgs.

Sodium Silicate—
Rotterdam, 1 ck.

Starch—
Boston, 1,529 bgs. J. Osborne & Co.
Antwerp, 1,282 cs.
Newport News, 200
Antwerp, 152 J. T. Fletcher & Co.

Stearine—
Antwerp 94 bgs.
,, 25 J. T. Fletcher & Co.

Talc—
Genoa, 100 bgs. Hughes & Chemery

Tallow—
Philadelphia, 100 tcs.
Boston, 300 cs. C. Hall
,, 250 J. Mackie & Co.
,, 921
Montreal, 100 brls.
B. Ayres, 575 cks.

Tartaric Acid—
Rotterdam, 2 cks.
Hamburg, 1

Turpentine—
Savannah, 750 brls.

Varnish—
New York, 2 brls. J. Brental

Waste Salt—
Hamburg, 1,016 bgs.

Wood Pulp—
Boston, 82 bdls. Lever Brs., Ld.
159 cs.
Hamburg, 116 bls.

Zinc Ashes—
Genoa, 22 brls.
,, 8 cks. Hughes & Chemery

Zinc Oxide—
Antwerp, 25 brls.

MANCHESTER.

Week ending December 10th.

Alizarine—
Rotterdam, 34 cks. Wilson
119 brls. Sons, & Co., Ld.
,, 34 cks.

Ammonia—
Rotterdam. 5 cyldrs.

Aniline Oil—
Rotterdam, 18 cks.

Aniline Salts—
Rotterdam, 38 cks. Wilson, Sons, & Co., Ld.
,, 27 cks.

Arachide Oil—
Rotterdam, 1 tin Wilson, Sons, & Co., Ld.

Asbestos—
Quebec, 5 bgs.

Benzol—
Treport, 24 cks.

Carbide—
Gothenburg, 1 dm.

Caustic Potash—
Treport, 20 dms.

Chalk—
Rouen, 2 cs.
Treport, 2

Chemicals (*otherwise undescribed*)
Antwerp, 4 cs.
Rotterdam, 10 cks. Wilson, Sons, & Co., Ld.
,, 13

Colours—
Antwerp, 11 pks.
Rotterdam, 83 brls.
182 cks. 16 bxs.
33 24 cs. 14
,, 69 bls. Wilson, Sons, & Co., Ld.

Extracts—
New York, qty.
Rotterdam, 4 cks. Wilson, Sons, & Co., Ld.
,, 10
Rouen, 8
Treport, 14

Farina—
Rotterdam, 3,000 bgs. N. W. Jackson
,, 100
,, 800 Wilson, Sons, & Co., Ld.
Stettin, 7,828 bgs. Browne, Geveke, & Co.
,, 885

Glucose—
Stettin, 100 bgs.

Glue—
Antwerp, 2 cks. 57 pks.
Rouen, 29 24 cs.
Rotterdam, 25 bgs. Wilson, 40 cs. Sons, & Co., Ld.
,, 30 bgs.

Limestone—
Antwerp, 3 crts. 5 cs.

Oxalic Acid—
Rotterdam, 30 cks. Wilson, Sons, & Co., Ld.

Paraffin Scale—
New York, 1,248 brls.

Phosphates—
Antwerp, 13 cks.

Potash—
Rotterdam, 2 cks. Wilson, Sons, & Co., Ld.
,, 5
Rouen, 21 dms.

Potassium Prussiate—
Antwerp, 20 cks.

Pyrites—
Huelva, 1,738 t. W. H. Stott & Co.

Soda—
Treport, 40 cks.

Sodium Nitrate—
Rotterdam, 35 cks.

Sodium Sulphate—
Rotterdam, 17 cks. Wilson, Sons, & Co., Ld.

Starch—
Antwerp, 432 cs.
New York, 100 bgs.
Rotterdam, 260

Stearine—
Rotterdam, 13 brls. Wilson, Sons, & Co., Ld.

Sulphuric Acid—
Rotterdam, 10 dms.

Tallow—
New York, 50 hds.
Tannin—
Rotterdam, 10 brls.
Tartaric Acid—
Rotterdam, 20 kgs. Wilson,
14 cks. Sons, & Co., Ld.
" 16
Tin Chloride—
Antwerp, 19 cks.
Tin Oxide—
Antwerp, 18 cks
Ultramarine—
Rotterdam. 4 cks.
White Lead—
Antwerp, 5 cks.
Rotterdam, 20
Wood Pulp—
Gefle, 4,200 bls.
Gothenburg, 3,642
Kallero, 4,535
New York, 1,043 rolls
Zinc Oxide—
Rotterdam, 60 brls. Wilson,
Sons, & Co., Ld.
" 80
Zinc White—
Rotterdam, 173 cks.

HULL.

Week ending December 10th.

Albumen—
Riga, 8 cks. Helmsing & Son
Alumina Sulphate—
Rotterdam, 81 bgs. Hull & Netherlands S. S. Co
Ammonium Chloride—
Hamburg, 3 cks.
Asbestos—
Reval, 130 bgs.
Barytes—
Amsterdam, 65 cks. Hull & Netherlands S. S. Co.
Antwerp, 351 bgs. Bailey & Leetham, Ld.
Bremen, 38 cks. Sissons Brs & Co.
" 43
Rotterdam, 105 Hull & Netherlands S. S. Co.
Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Hamburg, 47 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 1 Hull & Netherlands S. S. Co.
Colours—
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Antwerp, 2 cks. Bailey & Leetham, Ld.
10 brls. Wilson,
" 16 pks. Sons, & Co., Ld.
Bremen, 3 cs. J. Pyefinch & Co.
Ghent, 1 ck.
Rotterdam, { 61 bxs. 311 pks.
37 brls. Hull & Netherlands S. S. Co.
60 cks.
Cottonseed Oil—
New York, 250 brls. Wilson, Sons, & Co., Ld.
Cream of Tartar—
Bordeaux, 4 cks.
Rotterdam, 2 Hull & Netherlands S. S. Co.
Creosote Salts—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Dyestuffs—
Alizarine
Rotterdam, { 6 brls. Hull & Netherlands S. S Co.
1 bx.
7 cks.
Dyestuffs *(otherwise undes.)—*
Hamburg, 300 bgs. Wilson, Sons, & Co., Ld.
Farina—
Harlingen, 100 bls. Hull & Netherlands S. S. Co
Stettin, 438 bgs. Wilson, Sons, & Co., Ld.
Glucose—
Hamburg, 42 cks. Wilson, Sons & Co., Ld.
Stettin, { 100 bgs. "
10 cks.
Glue—
Antwerp, 2 cks. Bailey & Leetham. Ld.
Christiansund, 1 brl Wilson, Sons. & Co.. Ld.
Rouen, 69 pks. "
Kaolin—
Rotterdam. 241 bgs. Reckitt & Sons
Manganese—
Hamburg, 4 cks. Wilson, Leetham, Ld
Rotterdam, 10 Hull & Netherlands S. S. Co.
Ochre—
Antwerp, 97 bgs. Bailey & Leetham, Ld.
Paraffin Wax—
New York, 210 brls.
Phosphates—
Ghent, 160 t.
Pitch—
Hamburg, 22 cks. Wilson, Sons, & Co., Ld.
Potash—
Antwerp, 5 cks. Bailey & Leetham, Ld.
Dunkirk, 21 pks. Wilson, Sons, & Co.. Ld.
Hamburg, 11 cks. Bailey & 21 dms. Leetham, Ld.
Pyrites—
Huelva, 2,023 t.
Rosin—
Dunkirk, 8 pks. Wilson. Sons, & Co.. Ld.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soda—
Amsterdam, 135 bgs. Hull & Netherlands S. S. Co.
Antwerp, 4 cks. Bailey & Leetham, Ld.
Ghent, 120 bgs. Wilson, Sons, & Co., Ld.
Starch—
Bremen, 2,969 cs. Veltmann & Co.
Ghent, 234 Wilson, Sons, & Co., Ld.
New York, 150 bgs.
Stearine—
Antwerp, 53 bgs. Wilson, Sons, & Co , Ld.
Talc—
Bordeaux, 1 cs.
Tallow—
Boston, 1,017 brls. Wilson, Sons, & Co., Ld.
Dunkirk, 243 cks. "
New York, 440 "
" 92 tcs.
Tar—
Amsterdam, 5 brls. Hull & Netherlands S. S. Co.
Stettin, 438 bgs. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 12 cks. Hull & Netherlands S. S. Co.
Turpentine—
Libau, 157 cks. Helmsing & Son
" 11 Wilson, Sons, & Co., Ld.
" 155
Ultramarine—
Bremen, 7 pks J. & T. Seddon
Rotterdam, 8 cks. Hull & Netherlands S. S. Co
White Lead—
Amsterdam, 34 cks. Hull & Netherlands S. S. Co.
Antwerp, 84 Bailey & Leetham, Ld.
Hamburg, 1
Rotterdam, 41 Hull & Netherlands S. S. Co.
Wood Pulp—
Boston, 285 bls. Wilson, Sons, & Co., Ld.
Christiania, 3,540 "
Gothenburg, 426 "
Hamburg, 120 pks. Bailey & Leetham, Ld.
Zinc Ashes—
Christiania, 21 cks. Wilson, Sons, & Co., Ld.
Zinc Oxide—
Rotterdam, 20 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending December 15th.

Ammonium Oxalate—
Rotterdam, 1 kg. J. Rankine & Son
Aniline Salts—
Rotterdam, 4 cks. J. Rankine & Son
Arachide Oil—
Rotterdam, 2 cks. J. Rankine & Son
Asbestos—
St. John, N.B., 240 bgs.
Barium Chlorate—
Hamburg, 3 demijohns
Barytes—
Hamburg, 55 bgs.
Rotterdam, 200 J. Rankine & Son
Chemicals *(otherwise undescribed)*
Rotterdam 5 cs. J. Rankine
1 ck. & Son
Amsterdam, 1 cs.
Citric Acid—
Messina, 4 cks.
Colours—
Rotterdam, 48 pks. J. Rankine & Son
Dyestuffs—
Alizarine
Rotterdam, 164 cks. J. Rankine
45 brls. & Son
Aniline
Rotterdam, 42 brls. J. Rankine
20 bxs. & Son
Extracts
Baltimore, 25 brls 25 bdls.
Glucose—
Baltimore, 100 brls.
Glue—
Rotterdam, 40 bgs. J. Rankine & Son
Christiania, 102
Ochre—
Rotterdam, 13 cks. J. Rankine & Son
Potash—
Hamburg, 67 cks. 27 dms.
Rotterdam, 56 J. Rankine & Son
Pumice Stone—
Messina, 20 bgs
Pyrites—
Huelva, 1,789 t. Tharsis Sulphur & Copper Co
Rosin—
Savannah, G.A., 4,419 brls. W. N. Gemmell & Co.
Starch—
Baltimore, 500 bgs.
Rotterdam, 13 cs. J. Rankine & Son
Tallow—
Baltimore, 60 tcs.
Tannin—
Hamburg, 3 cs.
Turpentine—
Savannah, G.A., 600 brls. W. N. Gemmell & Co.
Waste Salt—
Hamburg, 251 cks.
White Lead—
Rotterdam, 52 cks. J. Rankine
49 pks. & Son
Wood Pulp—
Christiania, 1,611 bls.
Skutskar, 2,985 Henderson, Craig & Co.
" 2,400 Christopersen, Andrews & Co.
Hamburg, 500
Zinc Sulphate—
Rotterdam, 5 brls. J. Rankine & Son

TYNE.

Week ending December 10th.

Ammonium Chloride—
Hamburg, 3 cks. Tyne S. S. Co.
Castor Oil—
Antwerp, 30 brls. Tyne S. S. Co.
Colours—
Hamburg, 1 ck. Tyne S. S. Co.
Dyestuffs *(otherwise undescribed)*
Antwerp, 542 bgs. Tyne S. S. C
Limestone—
Antwerp, 22 crts. Tyne S. S. C
Ochre—
Rotterdam, 20 bgs. Tyne S. S. C
Paint—
Hamburg, 22 dms. Tyne S. S. C
Phosphates—
Treport, 190 t. Stephenson Chemical M. C
Rosin—
Wilmington, 5,477 brls.
Sodium Nitrate—
Iquique, 1,930 t.
Starch—
Rotterdam, 94 cs. Tyne S. S. C
Wood Pulp—
Rotterdam, 50 bls. Tyne S. S. C

GOOLE.

Week ending December 7th.

Alizarine—
Rotterdam, 114 cks. 12 cs.
Alkali—
Calais, 14 cks.
Antimony—
Boulogne, 8 cks.
Barytes—
Antwerp, { 240 bgs.
54 cks.
Bog Ore—
Delfszyhl, 234 t.
Caoutchouc—
Boulogne, 15 cks.
Colours—
Hamburg, 23 cks. 2 cs.
Dyestuffs *(otherwise undes.)—*
Amsterdam, 3 cks. 2 cs.
Boulogne, 69 13 pks
Rotterdam, 489 68 3
Farina—
Delfszyhl, 565 bgs.
Hamburg, 450
Indigo—
Rotterdam, 14 brls.
Lead Acetate—
Hamburg, 4 cks.
Logwood—
Belize, 516 t.
Ochre—
Dunkirk, 75 cks.
Phosphates—
Calais, 1,747 bgs.
Plumbago—
Boulogne, 3 cks.
Potash—
Calais, 30 dms.
Hamburg, 9 cks.
Pyrites—
Huelva, 616 t.
Seville, 1,220
Saltpetre—
Hamburg, 49 cks.
Rotterdam. 100 bgs.
Sodium Nitrate—
Dunkirk, 375 bgs.
Tartar—
Dunkirk. 35 bgs.
Waste Salt—
Hamburg, 120 t.

GRIMSBY.

Week ending December 10th.

Caoutchouc—
Antwerp, 3 cs.
Hamburg, 5
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Hamburg, { 3 cks. 31 cs. 1 cnr.
8 bgs.
Colours—
Antwerp, 7 cks. 125 pks
Hamburg, 45 12 cs. 33
Rotterdam, 16 18
Indigo—
Rotterdam, 7 cs.
Plumbago—
Antwerp, 10 bgs.
Soap—
Rotterdam, 320 bs.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending December 14th.

Acids—
Tellicherry, 4 cs. £11
New York, 50 85
Colombo, 49 300
Alum—
Mazagan, 5 t. £27
Ammonia—
Rangoon, 21 cs £15
Calcutta, 8 12
Amsterdam, 4 12
Cape Town, 10 c. 47
Ammonium Carbonate—
Rouen, 5 t. 10 c. £130
Dunedin, 1 31
Hiogo, 15 cks. 88
Melbourne, 8 11
B. Ayres, 4 cs. 14
Ammonium Chloride—
Melbourne, 2 t. £48
Rosario, 1 30
Salonica, 4 8 c. 135
Constantinople, 2 14 75
Ammonium Sulphate—
Jersey, 2 t. £20
Ghent 50 500
Antwerp, 63 5 c. 600
Sydney, 3 16 90
Bremen, 350 3,440
Arsenic—
Amsterdam, 15 cks. £57
Bleaching Powder—
Adelaide, 4 c. £6
Boracic Acid—
Melbourne, 3 t. £150
Borax—
Auckland, 3 t. 10 c. £33
Rotterdam, 50 cks. 75
Townsville, 40 kgs. 29
Carbonic Acid Gas—
Channel Is., 42 tubes £16
Rotterdam, 3 flasks 15
Caustic Soda—
Cape Town, 1 t. 15 c. £25
Lyttelton, 6 10 50
Auckland, 1 5 22
Rockhampton, 3 5
Napier, 9 20
Chemicals *(otherwise undescribed)*
Melbourne, 188 pks.(pt.) 1 cs. £513
Shanghai, 5 15
Barbadoes, 230 bgs. 57
Sydney, 1 4 pks 35
Dusseldorf, 64 cks. 143
Antwerp, 40 150
Adelaide, 12(pt.)15 44
Auckland, 8 cs. 27
Brisbane, 197 pks.(pt.) 175
Las Palmas, 285 bgs. 119
B. Ayres, 18 46
Boulogne, 1 47
E. London, 11 12
Gothenberg, 8 cks 94
Amsterdam, 12 114
Reval, 10 kgs. 59
Paris, 8 21
Boston 26 dms. 26
St. John N.B., 14 pks.(pt) 12
Philadelphia, 49 135
Lisbon, 3 bxs. 13
Perth, 16 12
Hamburg, 5 kgs. 7 pks. 119
Calcutta, 1 cs. 17
Citric Acid—
Reval, 6 t. 15 c. £790
Cape Town, 2 12
Copenhagen, 12 70
Dunedin, 3 20
Melbourne, 5 30
Rotterdam, 1 3 115
B. Ayres, 11 85
Coal Products—
Alizarine
Boston, 3 cks. £45
Reval, 12 cs. 50
Aniline
Calcutta. 1 cs. £38
Bombay, 1 9
Ghent, 1 ck. 12
Aniline Oil
Rotterdam, 12 dms. £400
Anthracene
Cologne, 100 cks. £720
Benzine
Canterbury, 20 dms. £6
Benzol
Boulogne, 50 cks. £121
Hamburg, 50 89
Carbolic Acid
Bombay, 16 dms. £10
Cologne 71 cks. 320
New York, 70 209
Rouen, 15 125
Auckland, 10 7
Adelaide, 2 6
Boulogne 24 182
Creosote
Lisbon, 78,103 galls. £1,224
St. Malo, 22,600 213
Seville, 4,055 brls. 3,041
Creosote Salts
Philadelphia, 669 bgs. £178
Dyes
Boulogne 10 cks. 6 cs. £194
Naphthaline
Hamburg, 6 cks. £52
Rouen, 1 12
Dusseldorf, 500 bgs. 244
Philadelphia, 320 40
Pitch
Pt. Chalmers, 20 cks. £15
Boston, 400 210
Dunkirk, 1,070 t. 1,195
Antwerp, 280 350
New York, 17 brls. 24
Townsville, 26 kgs. 3
Bahia, 9 25
Tar
Colombo, 20 rnlts. £23
Adelaide, 50 dms. 9
Townsville, 20 5
Sourabaya, 30 brls. 20
Tar Oil
Hamburg, 10 cks. £10
Copper Sulphate—
Dunkirk, 5 t. £91
Paris, 50 914
Rosario, 1 21
Treport, 33 2 c. 542
Cream of Tartar—
Dunedin, 1 t. 15 c. £130
Brisbane, 10 37
Melbourne, 3 10 263
Cairns, 10 kgs. 37
Sydney, 20 74
Disinfectants—
Hamburg, 25 cks. £125
Jamaica, 50 dms. 38
Bombay, 250 pks. 144
Penang, 5 40
Treport 22 29
Adelaide, 12 cs. 28
Melbourne, 10 brls. 60
Glycerine—
Hamburg, 10 t. 2 c. £460
Hyposulphite of Lime—
Philadelphia, 10 c. £172
Lime Salts—
New York, 10 c. £100
Manure—
Jersey, 148 t. 4 c. £570
Malaga, 5 13 43
Alicante, 14 6 88
Adelaide, 260 10 739
Guadeloupe, 5 10 150
Demerara, 20 160
Orotava, 15 90
Mauritius, 24 17 237
Geraldton, 1 3 6
Perth, 2 6 12
Nitric Acid—
Otago, 15 cs. £23
Channel Is., 14 carbys. 28
Phosphorus—
Wellington, 4 c. £35
Potash—
B. Ayres, 1 t. 2 c. £18
Potash Salts—
Auckland, 6 t. 1 c. £467
Potassium Bicarbonate—
Adelaide, 10 c. £8
Potassium Bichromate—
Lyttelton, 1 t. 10 c. £53
Potassium Carbonate—
Philadelphia, 2 t. 8 c. £62
Potassium Cyanide—
Townsville, 22 t. 12 c. £4,6 4
Sydney, 4 13 20 cs. 608
Auckland, 7 784
Delagoa Bay, 6 634
Durban, 3 29
Adelaide, 2 234
Carthagena, 2 cs. 2
Potassium Prussiate—
Stockholm, 2 cks. £31
Boston, 9 t. 6 c. 449
Saltpetre—
Hamburg, 10 t. 19 c. £230
Dunedin, 1 20
Santos, 4 17 120
Vigo, 7 8 140
Corunna, 2 40
Sheep Dip—
E. London, 6 t. £125
B. Ayres, 124 16 c. 7,042
Lyttelton, 500 cs. 873
M. Video, 200 450
Soap Lyes—
Hamburg, 37 t. £742
Soda—
Rosario, 3 t. 6 c. £10
Dunedin, 2 13
Toronto, 4 25
Soda Ash—
Sydney, 1 t. 6 c. £26
Soda Crystals—
Zanzibar, 1 t. 4 c. £5
Soda Salts—
Pt. Elizabeth, 3 c. £18
Sodium Bicarbonate—
Melbourne, 1 t. £6
Bombay, 1 2 c. 7
La Guayra, 1 7
Auckland, 1 18 11
B. Ayres, 1 13 17
Rio de Janeiro, 1 9
Sodium Hyposulphite—
Lyttelton, 2 t. 2 c. £11
Sodium Potassium Tartrate—
Sydney, 1 t. £59
Sodium Prussiate—
Hamburg, 5 t. £233
Sulphuric Acid—
Aden, 20 cs. £14
Tartaric Acid—
Cape Town, 7 c. £38
Sydney, 10 kgs. £104
Melbourne, 5 26
Napier, 1 8

LIVERPOOL.

Week ending December 14th.

Alkali—
La Guayra, 1 t. 5 c. £5
Barcelona, 15 9 1 q. 62
Valencia, 51 8 225
Catania. 3 1 1 13
Philadelphia, 12 9 3 65
Oporto, 2 17 10
Santander, 15 cks. 18
Alum—
Oporto. 5 t. 2 c. £22
Smyrna. 2 17 12
Rangoon, 3 2 2 q. 18
Melbourne, 1 5
Aluminous Cake—
Calcutta, 75 t. 19 c. 3 q. £180
Ammonia—
Cadiz, 1 t. 7 c £27
Ammonium Carbonate—
New York, 7 c £9
Stockholm, 5 t 9 3 q. 140
Ammonium Chloride—
Marseilles, 1 t. £16
Bilbao, 1 2 q. 34
B. Ayres, 1 53
St. Louis, 1 31
Karachi, 1 10 c. 47
Trieste, 1 33
Ammonium Sulphate—
Genoa, 47 t. £464
Las Palmas, 10 103
Valencia, 10 94
Ponce, 2 4 c. 1 q. 22
Gd Canary, 3 30
Antwerp, 19 16 200
Arsenic—
St. Louis, 2 t 9 c. 1 q. £50
Basic Slag—
Adelaide. 375 t. £806
Bleaching Powder—
Antwerp, 28 cks.
Baltimore, 228
Bombay, 10 38 cs.
Boston, 949
Everitt, 80
Genoa, 116
Newport News, 95
New York, 329 25 70 brls.
Philadelphia, 167
Natal, 20 dms.
Chicago, 50
Rotterdam, 36
San Sebastian, 28
Torino, 28
Valparaiso, 50 brls.
Wabash, 35
Bone Ash—
Vera Cruz, 4 c. 2 q £61
Boracic Acid—
Habana, 1 t. £2
Rotterdam, 1 20
Cape Town, 4 c. 6
Borate of Lime—
Antwerp, 147 t. 2 c. £1,310
Borax—
Rotterdam, 10 t. 9 c. 3 q. £162
B. Ayres, 9 3 8
Hamburg, 6 8 1 99
Toronto. 5 2 77
Shanghai, 1 10 20
Brisbane, 2 4 1 29
Calcium Chloride—
Boston, 3 t. 1 c. 50 dms £42
Natal, 4 18 11
Pt. Said, 2 4 6
New York, 12 1 54 57
Rangoon, 2 9 6
Gothenburg, 3 1 8
Sydney, 13 19 3 q. 31
Carbolic Acid—
Hamburg, 5 t. 1 c. £3 1
Paris, 1 3 1 q. 8
Yokohama, 5 30
Campana, 2 77
Shanghai. 2 cs. 7
Caustic Potash—
Hong Kong, 5 c. £6
Melbourne, 10 15
Boston, 4 t. 11 113
Sydney, 6 3 18
Baltimore, 10 14
Caustic Soda—
Alexandretta, 110 dms
Alexandria, 230 20 cks.
Alicante, 50
Aliveri, 22
Amsterdam, 62
Antwerp, 183
Bahia. 35
Barcelona, 717 10
Bilbao, 175 28 bls.
Bombay, 41
Bordeaux, 18
Boston, 290 75 30 bxs.
Brantford, 35
B. Ayres, 55
Chatelmeur, 17
Chicago, 30
Cincinnati, 50
Fiume, 30
Genoa, 78
Ghent, 15
Hamburg, 20
Havana, 60
Havre, 35
Hiogo, 200
La Guayra, 6
Malaga, 88
Melbourne, 10 5 25 pks.
Messina, 10
Monterey, 60
Motril, 150
Naples, 22
N. Orleans, 500
New York, 525 100
Oporto, 15
Paranagua, 10
Paris, 120
Philadelphia, 50
Rangoon, 15
Riga, 55
Mureinelle, 20
Rio de Janeiro 23
Rotterdam, 62
Rio G. do Sul, 110
Samarang, 117
Santander, 30 cks.
Savanilla, 10
Seville, { 50 / 62 brls.
Sterling, 50
Sydney, 30 15
Tampico, 80
Tarragona, 40 20 cks.
Toronto, 50
Townsville, 7

Trinidad, 120
Valparaiso, 10
Vancouver, 4
Varna, 10
Victoria, B.C., 10

Chemicals (*otherwise undescribed*)
New York, 45 cks. £531
Calcutta, qty 233
Rotterdam, 10 c. 15
B. Ayres, 2 7
Pettad, 8 tcs. 10
Sydney, 3 t. 45
Barcelona, 8 13 2 q. 125
Gothenburg, 1 2 31
Bilbao, 6 11 96
Antwerp, 14 21
Cape Town, 13 1 11
Odessa, 4 9 2 113
Philadelphia, 13 2 357

China Clay—
Bombay, 147 cks.
Boston, 2,778
Calcutta, 320
Genoa, 1,025 bgs.
Portland, M., 529 cks.
Madras, 26
Savannah, 8

Citric Acid—
Vigo, 1 c. £6

Coal Products—
Aniline Oil
Barcelona, 54 cks.
Naples, 1 dm.
Aniline Salts
Barcelona, 5 cks.
Vera Cruz, 40 kgs. 10 brls.
Creosote Oil
Lisbon, 100 brls.
Dyes
New York, 13 cks.
Naphtha
Melbourne, 50 dms.
Napthaline
Bordeaux, 188 cks.
Naptnol Salt
New York, 6 cks.
Naphthylamine
Marseilles, 63 brls.
Pitch
Antofagasta, 20 brls.
Antwerp, 15 c.
Aviles, 310¼ t.
Bordeaux, 282
Cape Town, 2 brls.
Tar
Bordeaux, 198 cks.
M. Video, 10 brls.
Philadelphia, 103
Sierra Leone, 10 kgs. 30

Copperas—
Calcutta, 14 t. 17 c. £30
Cape Town, 4 1 q. 10

Copper Sulphate—
Genoa, 10 t. 3 c. £163
Calcutta, 10 167
Bombay, 2 10 41
Batavia, 2 2 40
Sourabaya, 2 2 40
Samarang, 4 4 80
Batoum, 18 18 2 q. 315
Salonica, 1 7 3 27
Bourgas, 19 17
Tarragona, 1 5 24
Pernambuco, 4 3
Leghorn, 9 17 159
Cape Town, 1 17
Wellington, 10 8
Rangoon, 10 9
Rouen, 27 15 474
Switzerland, 10 9 220
Nantes, 5 2 3 91
Callao, 1 7 1 25
Talcahuano, 6 11 3 119
Bordeaux, 10 1 181

Disinfectants—
C. Coast Castle, 11 c. £9
Calcutta, 2 10
Perth, 1 t. 2 40

Dyestuffs (*otherwise undescribed*)
Extracts
New York, 19 cks.
Logwood
Moncton, 100 bgs.

Dyestuffs (*otherwise undescribed*)
Eureka, 20 bgs.
Ottawa, 25
Toronto 52

Glycerine—
Yokohama, 1 t. £4
Rotterdam, 21 12 c. 1,180
Pernambuco, 19 54
Santander, 3 cs. 9

Magnesia—
Genoa, 6 tcs. 35 cs.
Havana, 2 cks.
Vera Cruz, 10

Magnesium Chloride—
Riga, 7 t. 12 c. £18
Paris, 10 6 3 q. 21

Magnesium Sulphate—
Alexandria, 80 kgs.

Manure—
Gd. Canary, 67 t. 6 c. £581
Las Palmas, 10 2 87
Paris, 27 11 1 q. 364
Hamburg, 50 10 1 200

Oxalic Acid—
Philadelphia, 5 t. 10 c. £146

Paint—
Antwerp, 19 pks.
Benin, 30 kgs.
Calcutta, 17 cks.
Callao, 1 cs. 25 dms.
C. Coast Castle, 3 10
Cartagena, 20
Constantinople, 56 kgs. 2 bxs.
Curacao, { 40 / 4 cks.
Gd. Bassa, 16 kgs.
Guayaquil, 10
Hamburg, 34 tins
Kingston, Ja., 1
Lahou, 6
Lima, 3 cks.
Malta, 2 4
Manaos, 4
M. Video, 37
Old Calabar, 32 dms.
Para, 5 brls.
Philadelphia, 14
Rio de Janeiro, 10 kgs.
St. John's, 100
San Juan, 3 cks.
San Thome, 17 pks.
Santa Catharina, 4 kgs. 41
Secondee, 20
Sierra Leone, 90
Singapore, 180 45 dms.
Sourabaya, 120
Vera Cruz, 9 cks.
Victoria, B.C., 3

Painters' Colours—
Ambomi, 75 kgs.
Calcutta, 15 cs.
Hong Kong, 40 cks.
Mayaguez, 4
M. Video, 20 crts.

Paraffin Wax—
Genoa, 149 bgs.
Leghorn, 100
Naples, 50
Sourabaya, 30 dms.
Venice, { 10 / 60 kgs.

Phosphorus—
Vera Cruz, 1 t. 8 c. £322
Tampico, 1 184
Hiogo, 5 887
Shanghai, 2 2 341
Nagasaki, 1 210
St. John's, 2 18

Potash—
Pernambuco, 10 c. £6

Potassium Bichromate—
Salonica, 1 t. 1 c. 2 q. £35
Alexandria, 1 7 3 43
Vera Cruz, 1 3 3 31

Potassium Bromide—
Quebec, 2 c. 1 q. £19

Potassium Carbonate—
New York, 20 t. 9 c. £371
Boston, 18 9 320

Potassium Chlorate—
New York, 5 t. £150
Boston, 5 150
Riga, 2 10 c. 75
Philadelphia, 5 150
Gothenburg, 5 150
Vera Cruz, 3 90
Sydney, 2 60
Hiogo, 22 10 673
M. Video, 1 1 q. 6
Stockholm, 5 159
Konigsberg, 3 90
Melbourne, 5 150
B. Ayres, 10 17

Potassium Prussiate—
Genoa, 10 cks. £145
Naples, 2 26
Leghorn, 2 30

Potassium Sulphate—
Savanilla, 1 t. £38

Salt—
Bakana, 80 t.
Baltimore, 150
Barbadoes, 47 11 c.
Bilbao, 50 cs.
Bonny, 20
Boston, 100
Brisbane, 410
Brussels, 100
B. Ayres, 101 8
Calcutta, 3,957
Cape Town, 25
Conakry, 178 7
Dixcove, 10
E. London, 5
Egwanga, 120 8
Ghent, 50
Gibraltar, 50 crts. 50
Gd. Bassa, 9 t.
Guatanamo, 10
Halifax, 168
Harlingen, 435
Havana, 20
Iquitos, 40 15
Jamaica, 28
Lagos, 137 10
Melbourne, 100
M. Video, 11 3
N. Orleans, 830
New York, 91
Old Calabar, 290 16
Opobo, 60 5
Paspebiac, 200
Rotterdam, 450
St. John's, 50
Sierra Leone, 100 4
Svendborg, 131 2
Sydney, 70
Trinidad, 46 10
Victoria, B. C., 25

Salt Cake—
Antwerp, 120 t. £154
Baltimore, 25 12 c. 58
Philadelphia, 35 12 41

Saltpetre—
Syra, 2 t. 14 c. 1 q. £57
Tampico, 10 11

Sheep Dip—
B. Ayres, { 2,506 dms. / 41 t. 4 c. £2,642 / 500 cs.
Punta Arenas, { 25 cks. 100 625 / 300

Soap—
Accra, 60 bxs.
Aden, 125 bdls.
Algoa Bay, 3,350 130 cs.
Antigua, 50
Antwerp, 130
Attuaboe, 24
Axim, 100
Bangkok, 1,000
Beyrout, 1
Bombay, 2,970
Bonny, 240
Buluwayo, 5
Burutu, 22
Cairo, 20
Calcutta, 4 22 625
Callao, 3
Cape Town, 1,750
Casamance, 2
Calmar, 230
Constantinople, 20
Curacao, 30
Delhi, 5
Delagoa Bay, 300
Demerara, 300
Dunedin, 20
Durban, 550
Egwanga, 200
Gibraltar, 449
Gd. Canary, 1,568
Half Jack, 50
Iquitos, 850 250
Johannesburg, 525 155 5
Kingston, J., 1,313
Kurrachee, 25
La Guayra, 1
Las Palmas, 784
Madras, 60
Malta, 20
Manaos, 560
Manta, 350
Manila, 50 50
Mossel Bay, 723
Montreal, 510
New York, 33
Old Calabar, 1,300
Opobo, 2,000
Para, 500 200
Pernambuco, 3
Piræus, 7
Pt. Elizabeth, 1,120
Pt. Natal, 200 556
Pretoria, 20
Quetta, 30
Rangoon, 10
Rawal Pindi, 12
Rotterdam, 100
St. John, 440
St. John's, 90
St. Lucia, 173
Salonica, 150
San Juan, 200
Secondee, 12
Shanghai, 4 cks.
Sierra Leone, 85
Singapore, 984
Smyrna, 10
Sydney, 1,024 3 tnks.
Talcahuano, 1
Teneriffe, 450
Trinidad, 2,100
Vancouver, 2
Warri, 180

Soap Lye—
Hamburg, 100 dms.

Soda—
Hong Kong, 2 cks.
M. Video, 10

Soda Ash—
Algoa Bay, 4 cks.
Antwerp, 500 bgs.
Boston, 400 108
Brussels, 600
B. Ayres, { 125 brls. / 50
Cardenas, 86
Corfu, 50
Genoa, 600 22
Ghent, 365
Gothenburg, 50
Hamburg, 22
Hatherly, 40
Johannesburg, 80 kgs.
Kingston, Jam., 12
Kobe, 118
Melbourne, 233
Maumur, 745 bgs.
New York 13
Oporto, 23
Otago, 20
Patras, 10
Peterborg, 5
Philadelphia, 360 104 tcs. 10
Rio de Janeiro, 70 brls. 190
Rotterdam, 600 bxs.
Samos, 20
Smyrna, 200 bgs.
Syra, 40
Toronto, 750
Turin, 200
Venice, 600
Victoria, B.C., 43
Wellington, 191
Windsor Mills, 320

Soda Crystals—
Alexandria, 50 brls.
Boston, 56
Cape Town, 25 kgs.
Delagoa Bay, 20
Gibraltar, 20 bxs.
Havana, 6
New York, 264 280 cks.
Santo Domingo, 133
Victoria, B C., 10 kgs.

Sodium Acetate—
Barcelona, 16 cks.

Sodium Bicarbonate—
Adelaide, 50 kgs.
Alexandria, 30
Almeria, 40
Auckland, 240
Barbadoes, 100
Bilbao, 70 brls.
Boksburg, 20
Bombay, 100
Brindisi, 25
B. Ayres, 110 cks.
Calcutta, 750
Catania, 20
Fremantle, 16
Genoa, 42
Gisborne, 20
Havre, 14
Madras, 305
Maracaibo, 10 bgs.
Marseilles, 1
Messina, 25 kgs.
Montreal, 2
Odessa, 160
Para, 20
Rangoon, 8
San Fernando, 25
San Juan, 20
Sydney, 40
Valencia, 30 2
Vancouver, 20
Victoria, B. C., 50

Sodium Carbonate—
Amsterdam, 25 brls.

Sodium Chlorate—
Hamburg, 82 brls.
Rotterdam, 20 kgs.
Sodium Hyposulphite—
Callao, 100 kgs.
Starch—
Smyrna, 20 cs.
Sulphur—
Antwerp, 5 t. £21
Boston, 150 6 c. 641
B. Ayres, 10 1 46
Superphosphates—
Gandia, 75 t. 2 c. £207
Gd. Canary, 2 4
La Pallice, 522 11 2 q. 863
N. Orleans, 195 484
Ponce, 1 2
Valencia, 50 103
Tartaric Acid—
Havana, 10 £55
Varnish—
Alexandria, 1 cs.
Calcutta, 1
White Lead—
Calcutta, 80 kgs.
Zinc Chloride—
Bombay, 38 t. 10 c. £374

MANCHESTER.

Week ending December 14th.

Alum—
Susa, 6 brls.
Tunis, 26
Ammonium Chloride—
Beyrout, 5 cks.
Aniline Colours—
Germany, 2 cs.
Asbestos—
Bombay, 2 cs.
Carbolic Acid—
France, 2 cks. 42 btls.
Caustic Soda—
Jaffa, 130 dms.
Chemicals (*otherwise undescribed*)
Basle, 15 kgs 3 cs.
Coal Products—
Aniline Oil
France, 5 dms.
Germany, 8
Aniline Salts
Germany, 5 cks.
Naphtha
Paris, 25 cks.
Pitch
Belgium, 286 t.
Treport, 25
Coal Products (*otherwise undes.*)—
Belgium, 8 kgs. 4 brls.
Glue—
Germany, 20 cks. 10 crts.
Glycerine—
Germany, 6 dms
Linseed Oil—
Beyrout, 17 brls.
Mercuric Chloride—
Alexandretta, 1 cs.
Paint—
Beyrout, { 51 kgs. 5 brls. / 20 cks. 30 dms
Larnaca, 8
Painters' Colours—
Larnaca, 1 ck.
Paraffin Wax—
Antwerp, 5 cs.
Soap—
Alexandria, 23 bxs.
Bombay, 3 cks.
Sodium Bicarbonate—
Alexandretta, 10 brls.
Tunis, 30 kgs.
Sodium Naphthionate—
Germany, 16 cks.
Tallow—
Holland, 8 cks.
Zinc Chloride—
Russia, 3 cks.

HULL.

Week ending December 10th.

Ammonium Sulphate—
Antwerp, 135 bgs.
Venice, 303
Bleaching Powder—
Stettin, 4 cks.
Borax—
Christiania, 1 ck.
Caustic Soda—
Abo, 2 cks.
Chemicals (*otherwise undescribed*)
Antwerp, 3 cks.
Bombay, 346 brls.
Bergen, 4
Christiania, 10 22 pks.
Copenhagen, 5
Gothenburg, 11 22 cs. 15
Hamburg, 22 285
Karachi, 6 brls.
Konigsberg, 16
Reval, 2 cs.
Riga, 1 11
Rotterdam, 6 142
Stockholm, 18
Cottonseed Oil—
Amsterdam, 2,062 c.
Antwerp, 805
Bremen, 100
Copenhagen, 219
Dunkirk, 200
Ghent, 174
Gothenburg, 117
Hamburg, 1,035
Rotterdam, 1,540
Trieste, 322
Dyestuffs (*otherwise undescribed*)
Boston, 10 cks.
Christiania, 4
Gothenburg, 10
Linseed Oil—
Antwerp, 86 c.
Boston, 80
Christiania, 256
Christiansand, 14
Copenhagen, 12
Drontheim, 100
Hamburg, 354
Helsingfors, 343
Karachi, 24
Manure—
Venice, 100 bgs.
Paint—
Antwerp, 23 cks.
Bombay, 264
Hamburg, 25
Painters' Colours—
Amsterdam, 6 cks.
Antwerp, 91 4 cs.
Bergen, 1
Bombay, 174 141 10 pks.
Copenhagen, 5 1
Drontheim, 1
Gothenburg, 1 1
Hamburg, 7
Helsingfors, 60
Rotterdam, 2 10 dms.
Stettin, 4
Wyburg, 23
Pitch—
Antwerp, 389 t.
Soap—
Amsterdam, 144 bxs.
Helsingfors, 20 chts.
Tallow—
Gothenburg, 5 cks.
Hamburg, 28
Tar—
Amsterdam, 3 cks.
Antwerp, 6
Drontheim, 2
Rotterdam, 8
Stavanger, 2
Varnish—
Bombay, 125 dms.
Christiania, 1 ck.
Gothenburg, 1 1 cs.
Hamburg, 1
Riga, 1

GLASGOW.

Week ending December 15th.

Ammonium Carbonate—
Christiania, £
Stockholm, 80
Ammonium Sulphate—
Demerara, 435 t. 17¾ c.
Hamburg, 151 18
Borax—
Perth, W.A., £30
Rotterdam, 15
Castor Oil—
Fremantle, 7⅛ c.
Coal Products—
Benzol
Rotterdam, £150
Pitch
Bombay, £60
Hamburg, 8 t. 17 c.
Tar
Bombay, £266
Karachi, 58
Tar Oil
Rouen, £20
Tar and Pitch
Rangoon, £26 10s.
Copperas—
Bombay, £125
Farina—
Stockholm, 4 t.
Glue—
Rangoon, £41
Hydrochloric Acid—
Bombay, £70
Lead Nitrate—
Paris, £110
Rotterdam, 22
Linseed Oil—
B. Ayres, 3 t. 4¼ c.
Litharge—
Rotterdam, £12
Stockholm, 24
Magnesium Sulphate—
Christiania, £40
Manure—
St. Sampson's, £710
Nitric Acid—
Bombay, £675
Oxalic Acid—
Gothenburg, £65
Paint—
B. Ayres, £408
Bombay, 2 t. 3¼ c.
Fremantle, £6
Havana, 67
Karachi, £38 15s.
M. Video, £36
Painters' Colours—
Bombay, £75
Brisbane, 172
Rangoon, 89
Paraffin Wax—
Pt. Elizabeth, £302
Rouen, 90
Stockholm, 410
Trieste, 848
Potassium Bichromate—
Norrkoping, £22
Paris, 144
Rouen, 80
Stockholm, 123
Potassium Cyanide—
Melbourne, £750
Red Lead—
Rotterdam, £88
Stockholm, 181
Soap—
Trinidad, 2 t. 10 c.
Soda Ash—
Fremantle, 10 t. ¾ c.
Sodium Biborate—
Delagoa Bay, 4 t. 9¼ c.
Sodium Bichromate—
Rouen, 22 t. 13¾ c.
Stannine—
Demerara, £27
Starch—
Rotterdam, £13
Sulphuric Acid—
Bombay, £750
Rangoon, £303 14s.
Superphosphates—
Natal, 20 t.
Turpentine—
Stockholm, £80
White Lead (and Red)—
Transvaal, £146

TYNE.

Week ending December 10th.

Alkali—
Amsterdam, 53 t. 18 c.
Christiania, 2 15
Gothenburg, 5 3
Rotterdam, 1 13
Ammonium Carbonate—
Bergen, 16 c.
Hamburg, 1 t.
Antimony—
Rotterdam, 10 t.
Barium Binoxide—
Amsterdam, 5 t. 9 c.
Rouen, 15
Barium Carbonate—
Hamburg, 35 t.
Riga, 10
Rouen, 50 19 c.
Rotterdam, 152 18
Barytes—
Antwerp, 2 t.
Bleaching Powder—
Amsterdam, 25 t.
Antwerp, 97 16 c.
Christiania, 15 3
Drontheim, 9 17
Gothenburg, 90 17
Hamburg, 12 8
Konigsberg, 4 11
Rotterdam, 98
Caustic Soda—
Amsterdam, 25 t.
Antwerp, 4 7 c.
Christiania, 3 8
Copenhagen, 8 15
Rotterdam, 4
Rouen, 4 18
China Clay—
Copenhagen, 15 t. 8 c.
Copperas—
Bergen, 1 t. 7 c.
Iron Oxide—
Christiania, 1 t. 4 c.
Litharge—
Hamburg, 1 t. 7 c.
Riga, 14
Magnesia—
Copenhagen, 11 c.
Hamburg, 3 t. 3
Rotterdam, 1 q.
Paint—
Antwerp, 1 t. 5 c.
Bergen, 12
Hamburg, 1
Soap—
Bergen, 1 c.
Soda—
Amsterdam, 21 t. 17 c.
Christiania, 10 6
Rotterdam, 24 19
Soda Ash—
Antwerp, 2 t. 2 c.
Bergen, 10
Gothenburg, 20 7
Sodium Hyposulphite—
Copenhagen, 1 t.
Sodium Silicate—
Antwerp, 1 t. 18 c.
Sodium Sulphate—
Gothenburg, 3 t. 3 c.
Sulphur—
Gothenburg, 25 t.

GOOLE.

Week ending December 7th.

Coal Products (*otherwise undes.*)—
Amsterdam, 24 cks.
Antwerp, 4 12 cs.
Boulogne, 2 1 4 dms.
Ghent, 6
Dyestuffs (*otherwise unaescribed*)
Rotterdam { 22 cks. / 100 bgs.
Painters' Colours—
Antwerp, 2 cks.
Pitch—
Antwerp, 895 t.

GRIMSBY.

Week ending December 10th.

Alkali—
Hamburg, 12 cs.
Port au Prince, 430 dms.
Caoutchouc—
Gothenburg, 1 cs.
Malmo, 1 blk. 1 pk.
Coal Products (*otherwise undes.*)—
Dieppe, 55 cks. 5 pks.
Colours—
Port au Prince, 6 cs.
Painters' Colours—
Antwerp, { 1 kg. / 2 cks. 2 cs. 6 pks.

PRICES CURRENT.

WEDNESDAY, DEC. 21, 1898.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % per cwt.	5/9	&	8/3
,, Glacial ,,			35/-
Arsenic S.G. 2,000° ,,	1	4	0
Fluoric per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. per bottle	0	0	10
,, (Cylinder), 30° Tw. ,,	0	3	0
Nitric 80° Tw. per lb.	0	0	1½
Nitrous ,,	0	0	1½
Oxalic nett ,,	0	0	3
Phosphoric, 1750° ,,	0	0	11¾
Picric ,,	0	1	0
Sulphuric (fuming 50 %) per ton	15	10	0
,, (monohydrate) ,,	5	10	0
,, (Pyrites, 168°) ,,	3	0	0
,, (,, 150°) ,,	1	5	0
,, (free from arsenic, 145°) ,,	1	7	6
Sulphurous (solution) S.G. 1025 ,,	3	0	0
Tannic (pure) per lb.	0	1	2½
Tartaric ,,	0	1	1
Arsenic, white powdered nett per ton	16	5	0
Alum, loose lump ,,	4	7	6
Alumina Sulphate (pure) ,,	3	17	6
Aluminoferric ,,	2	3	6
Aluminium (Ingot metal 98/99¾ % nett ,,	148	0	0
Ammonia, Anhydrous per lb.	0	1	2
,, ·880 = 28° B. ,,	0	0	2½
,, = 24° B. ,,	0	0	1½
,, Carbonate nett ,,	0	0	3
,, Muriate per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd per cwt.	35/-	&	33/-
,, Nitrate per ton	33	0	0
,, Phosphate per lb.	0	0	4
,, Sulphate (grey) London per ton	10	2	6
,, ,, (grey) Hull ,,	10	2	6
Aniline Oil (pure) per lb.	0	0	5
Aniline Salt ,,	0	0	4½
Antimony per ton	37	0	0
,, (tartar emetic) per lb.	0	0	6¾
,, (golden sulphide) ,,	0	0	9
Barium Chloride per ton	6	17	6
,, Carbonate (native) ,,	3	15	0
,, Sulphate (native levigated) ,,	42/6	to	65/-
Bleaching Powder, 35 % nett ,,	4	12	6
,, Liquor, 7 % ,,	3	10	0
Bisulphide of Carbon ,,	11	5	0
Chromium Acetate (crystal) per lb.	0	0	5½
Calcium Chloride per ton	2	7	6
China Clay (at Runcorn) in bulk ,,	15/-	to	25/-
Coal Tar Products and Dyes :—			
Alizatine (artificial) 20 % nett per lb.	0	0	6¾
Magenta ,,	0	3	9
Anthracene, 3 % A, f.o.b. London per unit per cwt.	0	0	4
Benzol, 90's per gallon	0	0	9
,, 50/90 ,,	0	0	9
Carbolic Acid (crude 60°) ,,	0	1	11½
,, (crystallised 40°) per lb.	0	0	6¾
,, (liquid 95/97%) per gallon	0	1	0
Creosote (ordinary) ,,	0	0	2⅞
,, (filtered for Lucigen light) ,,	0	0	4
Crude Naphtha 30% @ 120° C. ,,	0	0	4
Grease Oils, 22° Tw. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston ,,	1	2	6
Solvent Naphtha, 90% at 160° per gallon	0	1	2
Copper per ton	56	2	6
,, Sulphate ,,	18	10	0
,, Oxide (copper scales) ,,	47	10	0
Glycerine (crude) 80% ,,	24	0	0
,, (distilled S.G. 1250°) ,,	48	10	0
Iodine nett, per oz.	0	0	7½
Iron Sulphate (copperas) per ton	1	2	6
,, Sulphide (antimony slag) ,,	2	0	0
Lead (sheet) ,,	14	5	0
,, Litharge Flake (ex ship) ,,	16	10	0
,, Acetate (white ,,) ,,	25	0	0
,, ,, (brown ,,) ,,	17	15	0
,, Carbonate (white lead) pure ,,	17	10	0
,, Nitrate ,,	20	0	0
Lime, Acetate (brown) (ex ship) per ton	5	7	6
,, ,, (grey) (ex ship) ,,	7	15	0
Magnesium (ribbon and wire) per oz.	0	2	3
,, Chloride (ex ship) per ton	2	10	0
,, Carbonate per cwt.	1	17	6
,, Calcined Magnesia per ton	9	10	0
,, Sulphate (Epsom Salts) ,,	2	12	6
Manganese, Sulphate ,,	16	10	0
,, Borate per cwt.	2	2	6
,, Ore, 70% per ton	3	10	0
Methylated Spirit, 61° O.P per gallon	0	2	0
Naphtha (Wood), Solvent ,,	0	2	10
,, ,, Miscible, 60° O.P ,,	0	3	9
Oils:—			
Cotton-seed per ton	15	5	0
Linseed ,,	17	10	0
Stearine ,,	25	0	0
Phosphorus (Yellow) per lb.	0	1	11
,, (red) ,,	0	2	8
Potassium Bichromate nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) per ton	14	15	0
,, Chlorate per lb.	0	0	3½
,, Cyanide, 98 % ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % per ton	22	5	0
,, ,, ,, 75/80 % ,,	17	15	0
,, Potash Hydrate Liquid 50 % ,,	10	10	0
,, Nitrate (refined) ,,	19	15	0
,, Permanganate per cwt.	2	15	0
,, Prussiate Yellow per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship) per ton	9	15	0
,, Muriate, 80 % ,,	8	15	0
Silver (metal) per oz	0	2	3½
Sodium (metal) per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) ,, ,, (f.o.r. w'ks.)	2	7	6
,, Acetate (ex-ship) ,,	12	5	0
,, Arseniate, 45 % ,,	13	0	0
,, Chlorate per lb.	0	0	3¼
,, Borate (Borax) nett per ton	15	5	0
,, Bichromate ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) ,, ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) ,, ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate ,,	6	10	0
,, Hyposulphite ,,	5	5	0
,, Manganate, 25 % ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool per cwt.	0	7	6
,, Nitrite, 98 % per ton	25	0	0
,, Phosphate ,,	10	7	6
,, Prussiate per lb.	0	0	4¾
,, Silicate (glass) per ton	4	10	0
,, ,, (liquid, 100° Tw.) ,,	3	7	6
,, Stannate, 40 % per cwt.	2	15	0
,, Sulphate (Salt-cake) per ton	1	6	0
,, ,, (Glauber's Salts ,,	1	7	6
,, Sulphide ,,	7	5	0
,, Sulphite ,,	4	15	0
Strontium Hydrate, 100 % ,,	10	15	0
Sulphocyanide Ammonium, 95 % per lb.	0	0	5⅞
,, Barium, 95 % ,,	0	0	4
,, Potassium ,,	0	0	6½
Sulphur (Flowers) per ton	7	2	6
,, (Roll Brimstone) ,,	6	3	9
,, Brimstone: Best quality ,,	4	12	6
Superphosphate of Lime (26 %) ,,	2	10	0
Tallow ,,	22	10	0
Tin Crystals per lb.	0	0	5¾
,, English Ingots per ton	86	0	0
Zinc (Spelter) ,,	23	15	0
,, Chloride (solution, 100° Tw.) ,,	6	0	0
,, Sulphate, Crystal ,,	6	7	6

THE

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SUGAR-BEET CULTIVATION.

WHEN some years back we drew attention to the work of Dr. Gustave Schack-Sommer in endeavouring to foster the cultivation of beet roots, we were thought by many to be succouring a phantom; while agriculturists thought that any attempt to infuse this subject with life and interest was as futile as flogging a dead horse. We were fully alive to the dismal records of the past, but Dr. Schack-Sommer did not try to run before he was able to walk with ease and confidence, and consequently we were disposed to follow his lead.

Primarily his sole object was to prove that sugar beets could be grown all over the United Kingdom as cheaply and of as good quality as those so extensively grown on the Continent. The question of whether sugar could be made at a profit, even when a regular supply of sugar beets was assured, was left severely alone until it had been proved beyond doubt that sugar beets would at least constitute a paying crop for the farmer, while being suitable to the requirements of the sugar manufacturer. This success, however, was forthwith met by further opposition from those who should have been most anxious to encourage such experiments on the ground that the reliability of a crop could not be gauged by the results of one, two, or even three years. The climatic conditions are so variable, and furthermore the trials had been confined to comparatively limited areas. Dr. Schack-Sommer did not endeavour to convince his opponents that it was unnecessary to show that sugar beets could be grown everywhere in the United Kingdom to prove that their cultivation was profitable he contented himself rather by renewed efforts to extend the sphere of his cultivation trials, and so answer his critics by the silent witness of facts. He did so with success, but there were still numerous disciples of Thomas-a-Didymus who remained sceptical, and doubted if any good could come from beet cultivation. Latterly these trials have been perpetuated by Mr. Sigmund Stein, who, in conjunction with Colonel Milward, has not only extended the cultivation trials, but actually aroused the interest of the Board of Agriculture, the Central Chamber of Agriculture, and caused the possibilities of a regular beet crop to be discussed in farming circles. Thus by patient endeavour a record of six years' duration has been attained, and during 1898 trials have been made on all kinds of soils in almost every farming county in the United Kingdom. The crops have been grown with all kinds of manures, passing from none at all to sewage, and from sewage up to mixtures composed of farmyard manure, sulphate of ammonia, dissolved bones, salt and gypsum; and from different varieties of seed obtained from France, Germany, and Russia. Yet, in the face of such variations, the results this year are among the best ever attained, and we feel sure that none who have studied the results of the past six years can refuse on honest grounds to

admit four things, which are emphatically demonstrated by the results of these trials, and they are these:—(1) That our climate is suitable; (2) that we can produce, not only as good, but even better sugar beets than are raised on the European Continent; (3) the richness of the beets in saccharine matter is sufficient to make the production of sugar a paying process; (4) that by doing so we shall not only help the farming fraternity, but foster many other home industries.

As things stand now it only remains to start a sugar factory. Sugar bounties, countervailing duties, and many other changes have befallen since the last effort was made, to say nothing of the wider and more substantial basis upon which the whole matter has been placed during the last few years, and without going into any tempting figures, we would in all seriousness commend the possibilities of home-produced sugar to all capitalists who are on the look out for a sound and probably highly lucrative outlet for their money.

POSITION OF THE NITRATE TRADE.

PROSPECTS OF A COMBINE.

AT the ninth annual meeting of the Santa Elena Nitrate Co., held at Winchester House, London, on Tuesday, Mr. Thomas P. Baptie, in moving the adoption of the report, said the condition of the nitrate market, with very little chance of an immediate improvement, had decided the board to continue the policy advocated at their last meeting of not producing any nitrate, whilst at the same time keeping the machinery in as good a state of preservation as possible. It was a trite observation that if they wanted to go to a depressing and discouraging company's meeting at the present time they had better select a nitrate meeting. During the year what had been regarded as an exceedingly encouraging feature in nitrate prospects had been the remarkable utterances in a highly influential scientific quarter not only respecting the value of this commodity in agriculture, but also with reference to the limited supply. Unless some fresh developments occurred they were told that in a comparatively short time the existing *oficinas* would be exhausted. It was something to be informed that they had a valuable commodity—and they were pleased at this crumb of comfort—but they must not run away with the impression that that was going to prove the salvation of nitrate companies. There was a great deal to intervene before that state of things could occur. They were at present busy with

THE OLD "CURE"—

a combination—and they had considerable faith that they would be able to arrive at a unanimous conclusion and restrict the output in such a fashion as to be in a position to sell the produce at a profit. A telegram had reached the directors intimating that the Combination Committee had arrived at the conclusion that it would be wise to propose a total output of 52,391,000 quintals, which, being 3,000,000 quintals in excess of their former proposition, showed that at anyrate the combination was a fact, that it existed, and that it was seriously endeavouring to cope with the problem before it. If successful the Combination would be a very valuable element in the restoration of nitrate prices. As to the future, he thought it was wise to be cautious and reticent. The directors particularly desired not to raise false hopes or expectations; but, on the other hand, they believed that possible developments might occur to assist the unfortunate nitrate shareholders. He would not, however, hold out immediate hope of any substantial restoration of former paying quotations.

POISONOUS FLANNELETTE.—The "Warehouseman and Draper" has received a sample of flannelette from a correspondent, who thinks it has "a suspicious feel," and who wishes to know whether it contains "any deleterious matter prejudicial to health." They have had the sample tested, and regret to say that the suspicions have been verified on analysis. It is loaded with chloride of zinc, and if the material were worn next the skin without washing the consequences would probably be serious. The effect of this adulteration is shown by the report on the Birmingham case which has created so much attention (*vide* last issue). Some weeks have elapsed since over 60 men employed in clearing away the snow in the streets were invalided in consequence of skin irritation produced by the chloride of zinc washed out from their overcoats and overalls. What effect flannelette treated with the same chemical would have upon the delicate skin of women and children we leave to the imagination of the reader.

COPPER AND THE STANDARD OIL CO.

THE Boston copper market is in a bullish frame of mind; but whether this is due to the mere rumour that Mr. J. D. Rockefeller is going largely into copper enterprises or whether it is traceable to the actual fact that he is doing so cannot easily be ascertained. A great programme is assigned to Mr. Rockefeller—nothing less than the control of the copper mining industry of the whole United States. Report has made him the purchaser of predominating interests in the most various and widely separated properties and companies. It is declared that he has already secured a majority interest in the stock of the Butte and Boston Mining Company, and is negotiating for the purchase of the controlling interest also of other copper mines at Butte, Montana; that he is trying to buy the Anaconda Mine from J. B. Haggin and the Montana Ore Purchasing Company from F. Augustus Heinze.

There may be some truth in these stories, or there may not be. At any rate, there are various glaring inaccuracies. Mr. Haggin, for example, does not own the Anaconda. He owns about a one-third interest in it, and interests of similar size are held by the Rothschilds, under purchase from the Hearst estate, and by Marcus Daly. Then, as for the rumour which represents Mr. Rockefeller as sighing for the control of the whole industry, it may be pointed out that there are some things too big even for an oil king, and that this appears to be one of them. The copper mines of the United States cannot be valued at less than several hundred millions of dollars; and in any attempt to capture them and control the output there are powerful European interests which would probably have a word or two to say. It seems likely that Mr. Rockefeller has embarked in certain isolated copper ventures which offered a prospect of profit, and that upon this circumstance the bulls have erected an airy superstructure.

In Canada at all events the Standard Oil people intend getting to business with no further delay, and some 43 miners are now on the ground engaged in opening up old properties. In spite of the experience of the past, those who have organised the present "deal" have great faith in the Michipicoton deposits, and believe that the north shore of Lake Superior will develop mines similar to the Calumet and Hecla, the Arcadian, &c., on the south shore, which are the greatest in the world, and have in ten years paid $71,000,000 in dividends. It will involve a considerable expansion in Canadian mining industry if the event should be found to justify the expectation.

PUTRID TINNED FOODS: HEAVY PENALTY.—At Greenwich last week Charles W. Baxter was charged with depositing for sale at Paradise-street, Rotherhithe, various tinned foods unfit for food, and also with selling the same. In November last the defendant sold the Paradise-street business to a Mrs Grant, and soon afterwards the sanitary inspector seized 1,100 tins of food quite unfit for human food. The defendant was fined £50. on each count, or in default one month in each case. Notice of appeal was given.

THE ASSOCIATION OF SULPHATE OF AMMONIA MANUFACTURERS.—This combination of sulphate of ammonia makers comes to an end this year owing to the formation of a new association founded on a very different basis, and having aims and objects different from the old Society. The Association which has now been wound up existed principally for the dissemination of information relating to market prices and to imports and exports of sulphate, though it also concerned itself in an attempt to bring about an universal contract note, and successfully to abolish the "Still Tax" imposed by the Board of Inland Revenue. The subscription paid to the Association was one guinea per annum for all makers of under fifty tons yearly, and two guineas for all makers of over that quantity. The new association is called the Sulphate of Ammonia Committee, and makers who join have agreed to pay a sum equal to so much per ton of sulphate produced. This will produce a very large income yearly, from which it is proposed to give a prize of £500 for the best treatise on the use of sulphate of ammonia in agriculture, and also to offer prizes for crops grown with sulphate, at some of the various agricultural shows in the United Kingdom. The last meeting of the Council of the old Association was held on Friday, the 23rd inst., at which the hon. sec (Mr. George E. Davis) was presented with a large and massive solid silver tray on behalf of the members, by Mr. Isaac Carr (the chairman of the Association), which bore the following inscription:—"Presented to George E. Davis, Esq., by the members of the Association of Sulphate of Ammonia Manufacturers, in recognition of his able and untiring services as Honorary Secretary during a period of fourteen years. December, 1898." With the above, and having the same inscription on a large silver shield, was a cabinet of very fine dark oak, containing in five drawers 198 pieces of table plate and cutlery, the whole of which, including the tray, were supplied by Mr. John Byrne, of Bold-street, Liverpool.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improved Electrical Furnace. E. B. Phillips and W. H. Bray. 26,214. December 12.
Enriching Gases by Acetylene. W. J. Rodwell. 26,215. December 12.
Gas Plant Valves. The Economical Gas Apparatus Construction Co., Ltd., and A. I. Payne. 26,238. December 12.
Bye-product Recovery Coke Oven. R. Brunck. 26,253. December 12.
Treating Peat. W. F. Browne. 26,256. December 12.
Recovery of Hydrocyanic Acid from Gases. J. Büeb. 26,259. Dec. 12.
Manufacture of Nickel Alloys. J. Patrick. 26,260. December 12.
Improved Coke Oven. H. Poetter. 26,269. December 12.
Obtaining Smokeless Combustion. A. Koeppe. 26,270. December 12.
Improved Match. W. P. Jones and H. M. Bates. 26,332. December 13.
Improvements in Cleansing Filters. A. Harris. 26,382. December 13
Improvements in Tanning. H. Holmes. 26,390. December 13.
Manufacture of Oxide of Iron. W. S. Rock. 26,391. December 13.
Acid-proof Non-conductor for Electrical Purposes. 26,397. December 13.
Improvements in Filter Beds. S. H. Adams. 26,406. December 14.
Drying White Lead. H. C Webster and T. French. 26,434. December 14.
Manufacture of Salt from Brine. G. W. Handscomb. 26,450. December 14.
Purifying Saccharine Liquors. E. Luck and S. G. Luck. 26,475. Dec 14
Manufacture of Calcium Carbide. J. D'Orlowsky. 26,177. December 14.
Improved Filter for Sewage, etc W. O. E. Meade-King. 26,525. Dec. 15.
Reducing Ores by Ozone. D. Martini. 26,531 December 15.
Treating, Drying Oils, etc. C. de la Roche. 26,539. December 15.
Smoke Consuming Apparatus. W. A Granger. 26,543. December 15.
Treating Ores by Electrolysis. J. A. Mays. 26,614. December 16.
Regenerating Rubber, etc. The Marquis H. B. de Laquenille. 26,617. December 16.
Manufacture of Chemical Manure. C. G. T. Dixon, J. Crone, D. C. Taylor, and F. Williams. 26,682. December 17.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in and connected with the Extraction of Gold by Electrolysis. O. March, 53, Victoria-street, Westminster. Eng. Pat. 27,508. November 23, 1897.

This cell may be used for the extraction of gold from auriferous material by direct chlorination and the simultaneous generation of sodium amalgam, or for the electro-deposition of gold from solution. If preferred, it can be used to generate chlorine and sodium directly, which are subsequently employed in the chlorination process. There are two figures illustrating the construction of the cell, in which the cathode elements are noteworthy.

Improvements in and Connected with Electric Furnaces for the Production of Calcium Carbide and other Substances. H. S. Riant, 36, Ockenden-road, Southgate-road, London. Eng. Pat. 27,428. November 23, 1897.

The furnace is of the vertical type, the hearth being formed of an electrode, which is only just sufficiently out of the horizontal to discharge the fused carbide from the bottom of the furnace. A vertical electrode passes through the top of the furnace, and is also capable of lateral adjustment. The material is fed in through a hopper and shute so as to be delivered right into the sphere of the arc between the poles. As fast as the carbide is formed, it is removed from the furnace, and a purer product results. The furnace is simple in construction, which is illustrated by two figures.

Improvements in the Construction of Bacterial Tanks and Filters for the Purification of Sewage. F. W. Wentworth-Shields, Brentwood Villa, Sholing, Southampton. Eng. Pat. 22,000. Oct. 19th, 1898.

Three rectangular tanks are arranged side by side. The sewage enters the first tank and passes through a screen at the far end, after which it passes under a baffle plate and overflows into a channel, which feeds the sewage, to the ends of the other two tanks, through which it flows back to the outlets at the end of these two tanks. At either end of these tanks are screens, between which coke breeze, &c., is packed. The sewage flows over the lip of the feeding channel as over a weir, at the ends of the tanks, and is thus aërated as it enters and leaves each tank. There are four figures which clearly indicate the construction of the filters and the aërating weirs.

Process and Apparatus for obtaining large well-formed Crystals from Solution. J. Bock, Radebeul, nr. Dresden. Eng. Pat. 28,113. November 29, 1897.

The method consists in slowly passing a saturated solution of the substance to be crystallised over and round a long thin layer of crystals of like substance, in the direction of the longitudinal axes of the crystals, and at the same time communicating a rocking motion to the vessel containing the crystals at right angles to the flow of the liquid. The apparatus employed is simple. A long semi-circular trough is suspended from a shaft so as to be slightly out of the horizontal plane, and this shaft is actuated by an eccentric. In this way the trough is rocked see-saw fashion in a direction at right angles to the flow of the liquid. The exit from the trough is connected by flexible hose to a small pump, which receives the partially cooled mother liquor, pumps it back to a vessel above the level of the trough, where it is heated to its initial temperature and re-saturated. By a flexible hose this solution is conveyed to the trough inlet and once more circulated. The trough is covered by loose tiles, so that the growth of the crystals can be watched. There are two figures.

Improvements in the Production of Double Superphosphates. G. O. J. Schüler, 31, Oberweik, Stettin-on-Oder, Germany. Eng. Pat. 1,435. January 18, 1898.

Phosphoric acid is boiled with finely ground phosphate, calcium carbonate, hydrate, or oxide in about the proportion to form monocalcium phosphate. The mixture begins to boil at 106°—107° C., and by keeping the temperature below 115° C. the formation of pyro-phosphate is avoided. As a rule, 110° C may be taken as a convenient working temperature. Ammonium and potassium salts may also be used in the boiling process, together with the phosphate, etc.

New or Improved Means for Extracting Alumina from Aluminous Ores. E. Raynaud, Tessenderloo, Belgium. Eng. Pat. 22,263. October 2, 1898 (under International Convention, March 25, 1898).

The ore is crushed and mixed with any sulphuretted body, such as the residue from soda manufacture, pyrites, etc, and heated in a reverberatory or other suitable furnace at a temperature which will not conduce to the formation of aluminate. For like reason only a small amount of sulphuretted body is used. Thus bauxite is mixed with 10% of its weight of sodium sulphate and sufficient carbon to effect reduction. After furnacing, the charge is placed in a suitable vessel containing water and sulphur dioxide blown in. The solution is decanted, clarified, and heated to expel excess of sulphur dioxide, whereby a precipitate is obtained, which can easily be converted into pure alumina by calcining gently.

A Method of Oxidation and Bleaching by Electrolysis. J. G. A. Rhodin 47, Victoria Buildings, Manchester. Eng. Pat. 3,749. February 15, 1898.

This is a modification of patent 21,509/96, the carbon anodes being replaced by iron nickel or other suitable metal, and the shape of the inner vessel modified so as to admit of fibres, yarns, etc., being passed through its contents. The mercury cathode is retained. A solution of caustic soda, potash, or resinate of soda is placed in the inner vessel and water in the outer. On passing the current the mercury amalgamates with the alkaline metal, giving the same up again to the water with the formation of caustic alkali. In the inner vessel oxygen is formed, being partly absorbed by the alkaline solution and partly evolved in the gaseous state. A powerful oxidising agent is thus formed, through which yarns, fabrics, etc, may be passed. Also by adding ethyl alcohol to the caustic solution in the inner vessel salts of formic and acetic acid derivatives are produced. The caustic alkali constantly being generated in the cathode compartment is, of course, used over again.

THE FATAL EXPLOSION OF ACETYLENE GAS.—The inquest on the body of Alfred Burlingham, jeweller, aged 32, was resumed at Kings Lynn last week. Burlingham was killed on the 9th inst., whilst experimenting with acetylene gas. Colonel Ford, chief inspector under the Explosives Act, and Mr. Henry Sutcliffe, of the Safety Acetylene Gas Generator Company, Halifax, were present. The latter said he supplied the apparatus used to Burlingham, without the instructions. This was customary, as sometimes in transit by rail portions of machinery were broken, and trying it under these circumstances was likely to lead to serious consequences. Instructions were forwarded immediately on receipt of information from customers that the apparatus had arrived safely. Colonel Ford said that, without desiring to prejudice anyone, he thought perhaps Burlingham tried the machinery and did not know sufficiently how it worked. A verdict of death by misadventure was returned.

Official Memoranda.

(*From the Board of Trade Journal.*)

CUSTOMS TARIFF OF TASMANIA.

The following statement shows the specific and *ad valorem* rates of customs duty now levied on articles imported into the Colony of Tasmania, together with a list of articles which are admitted free :—

Articles.	Rate of Duty. s.	d.
Acid, acetic, glacial acetic, and pyroligneous, imported in any quantity of not less than one ton at any one time by manufacturers to be used in their own factories, for each gallon containing not more than thirty-three per cent. of absolute acid per gallon	1	4
And for each additional one per cent. of acid per gallon	0	0¼
Acid, acetic, glacial acetic, and pyroligneous, for each gallon of any strength not exceeding six per cent. of absolute alcohol. per gallon	1	0
And for each additional one per cent. of acid per gallon	0	0¼
Acid, sulphuric, muriatic, and nitric, not elsewhere exempt per cwt.	2	6
Acid, tartaric and citric per lb.	0	4
Candles per 100 lbs.	0	2
Carbonate of soda ,,	0	1
Cement, mineral, including plaster of Paris per cwt.	0	9
Glucose ,,	6	0
Glue per lb.	0	1
Oil, crude, shale, or petroleum, imported solely for fuel purposes, or for the manufacture of gas, also Russoline, per gal.	0	3
Oil, kerosene and gasoline ,,	0	6
Oil, lubricating, in bulk, of which the chief component is mineral per gallon	0	6
Paints of every description, not being artists' colours per lb.	0	0½
Salt, in bulk per cwt.	1	6
Soap, fancy or perfumed per lb.	0	3
Soap, common or laundry, and other saponaceous compounds, not perfumed or fancy, for household purposes per lb.	0	1
Soda crystals ,,	0	0½
Spirits of tar and naphtha per gallon	0	6
Turpentine ,,	1	0
Varnishes and polishes, not elsewhere specified ,,	1	6
Vinegar, other than aromatic and raspberry, for each gallon of any strength not exceeding 6 per cent. of absolute acid per gallon	1	0
And for each additional one per cent. of acid ,,	0	0¼
Whiting per cwt.	0	9
	per cent.	
Grease, axle, and other solid lubricants, not elsewhere specified *ad valorem*	10	,,
Nitro-compounds, and other explosives, not elsewhere specified *ad valorem*	10	,,

FREE LIST.

Acid, carbolic and boracic ; acid, sulphuric, rendered unfit for other purpose than the manufacture of artificial manures; acid, sulphuric, for mining purposes only, or for the manufacture of aërated waters ; antimony ingots ; antitoxin ; arsenic, crude ; articles in a crude state used for tanning, not elsewhere specified ; asbestos, unmanufactured ; bags, flour, second-hand, imported for the purpose of packing manure ; borax in bulk ; carbon, bi-sulphide ; chalk, in the lump ; clay, fire, lumps and pipe, unmanufactured ; coke ; communion plate ; copper, sulphate of; copperas ; cyanide of potassium.

Dextrine ; dye-woods and dye-stuffs for manufacturing purposes only.

Ivory black, lamp black and vegetable black ; kreosote, crude ; lime, carbolate and chloride ; logwood ; London purple.

Nickel in bars; oil, batching to be used in the manufacture of woollens ; oil, refuse shale, imported to be used in brick-making ; oil cake and cocoanut cake and similar compounds, imported as food for cattle ; oil, cocoanut and palm, unrefined ; oil, cod, sod, whale, seal, and penguin oil, for tanning purposes ; oil, direct from whale fisheries ; oil, to be exclusively used in the preparation of leather, viz , curriers', sole leather, rough leather, finishing and kid oils ; ores of metal of all kinds ; paraffin wax and mineral wax ; Paris green, dry; phosphorus ; pitch; plumbago; potash and pearlash, crude and caustic potash, in bulk ; pottery materials, viz., litharge, china clay, Cornish stone, felspar, manganese, oxide of cobalt ; preservitas and similar preservatives, to be used in the preservation of fruit and dairy produce, in a fresh condition, not elsewhere specified ; quicksilver ; resin ; salt, rendered unfit for human consumption, and rock salt ; sheep-dip ; soda, ash, caustic, and silicate in bulk ; stearine ; tallow ; sulphur ; sumac.

Tannin and tannin extracts ; tar ; ultramarine blue ; zinc, salts of.

NEW ZEALAND SOAP TRADE.

A new industrial enterprise has been started in the neighbourhood of Wellington. This is a soap factory, and it is stated that the appliances are very complete and up-to-date, and that it is the proprietor's intention to devote himself chiefly to the manufacture of fancy soaps.

The production of candles and soap was among the earliest of the manufacturing industries established in the Colony, as was only natural when the increase in the flocks and herds resulted in a good supply of tallow. The days when New Zealand had to import her supplies of common soap have long since passed away, and the importation in the year 1897 was only 13 cwt.

There was once an export trade in common soap, chiefly to Fiji and the South Sea Islands. To judge from the returns, however, this trade seems to be steadily declining. In the year 1892, the exports were over 6,000 cwt., the value over £4,600. But the figures have diminished year by year till in 1897 they stand as 2,845 cwt., value £2,038. The importations of fancy soaps are, however, increasing from year to year. The figures for the last four years are as follows :—

Years.	Quantity. lbs.	Value. £	Soap Powder, Extract, &c., Value £
1894	415,642	8,980	—
1895	452,181	10,473	—
1896	591,530	14,452	3,902
1897	725,476	18,404	3,876

It may be stated that in the year 1896 a new classification was adopted in the statistics, and the imports of "Powder, Extract, etc.," which are given separately in 1896 and 1897 were, before that, included under the general heading. This makes the increase the more striking.

THE STUTTGART COMMERCIAL MUSEUM.

According to a report of the United States Consul at Stuttgart, the Musterlager or Commercial Museum in that city seems to be very useful to its members.

The report of this German association for the year 1897 states, *inter alia*, that the trade with India, which was developing well in past years, has suffered from the plague.

The visits to the sample rooms were about the same as in former years ; the purchasers ordered novelties principally, and bought, as far as South and Central American markets were concerned, the old staple articles only in small quantities.

The number of articles hereinafter mentioned as ordered through the museum gives an idea of the variety of the exhibition, and shows that by its connection with the best German manufacturers, the association is in a position to give the fullest information about German industries and to place foreign orders with the best and most efficient manufacturers.

The number of purchasers through the office for the three years last past were : In 1895, 333 ; in 1896, 371 ; in 1897, 358.

Orders were received :—

Year.	In the sample rooms and by correspondence.	Through agents.	Through Hamburg agency.	Total.
1895	1,675	49	564	2,288
1896	1,740	34	659	2,433
1897	1,547	51	730	2,328

The orders received were divided among 439 manufacturers from Wurtemburg and elsewhere. The year 1897 brought no losses whatever to the members. Orders were received last year from the principal cities of both hemispheres, even including such remote centres as Hong Kong, Bombay, Colombo, Sydney, Melbourne, and Johannesburg. The following is a partial list of articles ordered at the sample room, personally or by correspondence :—Chemicals and pharmaceutical preparations, medical wines, sparkling and still wines, beer, oilcloths, corks, chocolate, candies, sugar, dried vegetables, gelatine, cigars, hops, sausages, perfumeries, stoneware, porcelain and glassware, meerschaum and amber articles, sandstones, steel and barbed wire, household machines of all kinds, water filters, pumps, printing presses, canvas shoes, gloves, india-rubber goods, tin foil, iron, tin, copper, aluminium, wire, metal, nickel and silver plated ware, mathematical instruments, thermometers, optical instruments, iron furniture, iron safes, silverware, clocks, watches, ivory, bone and jet ware, bicycles, sewing cotton and silk, worsteds, knitting yarn, ribbons, laces, linen, felt, cotton and woollen goods, pianos and musical instruments of all kinds, and a great number of other articles.

The number of catalogues now issued is 9,575.

THE ADVANTAGES OF PINE APPLE FIBRE.

There is a considerable amount of information extant which seems to furnish evidence as to pineapple fibre actually possessing the essential properties required to make it a good substitute for flax. It has even been claimed that in both its wild and cultivated forms the pine-apple yields fibres which, when spun, surpass those obtained from the ideal flax in strength, fineness, and lustre.

s been stated that a certain quantity of the fibre prepared at ore tested against an equal quantity of flax sustained 350 lbs., he latter could not bear more than 260 lbs. Another advantage be peculiar to pineapple fibre is imperviousness to moisture. nade of it are thus said to withstand constant immersion in water; the same reason and its non-liability to rot it is used in India for ng necklaces.

the characteristics that render it readily adaptable for textile s, it has been observed by one writer on the subject that the rocess of bleaching suffices to destroy the adhesion between the of fibres, and so renders it fit for spinning in the same way as The isolated filaments are described as very fine, of a tolerably diameter from end to end, but of different size, of remarkable ty, curling and crisping readily under mechanism. It has been ntly asserted that the fibre can be employed as a substitute for d as a material for mixing with wool and cotton, as silk is now nsively employed. For sewing thread, twist, trimmings, laces, s, and the like, its particular qualities seem to render it speci- plicable.

the pineapple of the Philippines a famous cloth is manufactured, esteemed for its fine hair-like fibres, but this is considered as belonging to a different species. Reference has also been a plantation established years ago at Singapore by a Chinaman, ere prepared pineapple fibre for export to his native country to "in the manufacture of linen."

LIQUID HYDROGEN AND AIR.

THEORY AND PRACTICE.

the last meeting of the Royal Society, Professor Dewar gave an account of some of the work he has recently done on liquid en. He first showed how it could be used as a condensing agent production of very high vacua. If the end of a closed tube ing air was immersed in it, the contents of the tube were quickly sed as solid air, and, if the portion of the tube from which the thus been removed was sealed off with a blowpipe, a vacuum tained so high that it would scarcely allow an electric discharge . The rapidity with which this result was achieved was very able, the immersion never lasting more than a minute, and Sir n Crookes stated that the vacuum produced in this short space of as higher than he was in the habit of getting with the ordinary after several hours of work. As to what remained in the tubes, they were specially prepared, spectroscopic examination showed rbonic oxide spectrum, and, unless they had been completely also that of hydrogen. If the carbon was eliminated, the hydrogen m was left. Sir William Crookes had examined two carefully ed tubes, provided with electrodes. He found in one the spectrum rogen and the yellow line associated with neon, and in the other . Professor Liveing, who had examined some most carefully ed tubes without electrodes, had found in all the carbon spectrum, ly due to carbonates in the glass. Professor Dewar went on to of the lowering of temperature produced by boiling hydrogen reduced pressure. Theoretical considerations had led to the ation that a diminution of temperature might thus be obtained to tent of about 9°, but, in his experiments with one platinum meter, its resistance at the temperature of liquid hydrogen under a pressure of 11in. only diminished very slightly—to the lent of about 1° Centigrade. Whether the thermometer had way, or whether liquid hydrogen did not fall in temperature like iquids when evaporated under reduced pressure, or whether the was due in some way to the conduction of heat by the platinum he could not tell. The observations had been made with the t care, but no explanation had been found. So far, however, particular platinum thermometer was concerned a limit appeared been reached; and further experiment was required to deter- ow far the platinum resistance curve can be trusted at the lowest ble temperatures.

PRACTICAL APPLICATION OF LIQUID AIR.

rican trade papers say that liquid air will soon take the place of breweries, hotels, hospitals, and even in private residencies. be even cheaper than ice, and it requires little to secure the results. Liquid air is said to have the appearance of pure for it is simply the ordinary air reduced to liquid form. One of the liquid at lowest temperature is equivalent for refrigerating es to one ton of ice. A tumbler-full placed in the ordinary ice- will retain a temperature of zero in the chest for twenty-four

A perfect system of handling the product has been devised by York firm, and it is the intention of the company to deliver the air just like ice, milk, or any other thing. It can be stored in ed vessels with perfect safety and convenience. Ice plants will ble to compete with this new cold process, and it may result in n-blow to the entire ice business.

It is said in cooling, liquid air produces a dry and healthful atmosphere. A small quantity will reduce the temperature of a room, and in the hot weather rooms can be made remarkably comfortable in a few minutes. Hot hotels and theatres can be given a cooling process.

THE MANCHESTER INDIA-RUBBER INDUSTRY.

MANCHESTER is the chief centre in England and in Europe for the manufacture of india-rubber, London coming second; and the importance of the industry may be estimated when it is pointed out that the raw rubber imported into England from all parts—America, Africa, Asia and Polynesia—reached in 1897 15,000 tons with a total value of £5,000,000. Some of this amount would be re-exported, but the greater bulk is consumed at this centre. The industry may now be divided into three sections—the waterproofing, the making of tyre rubbers, and the production of all articles intended for mechanical or surgical purposes, tobacco pouches, etc. The waterproofing branch has been unsatisfactory during the year. What with the dry seasons and the changes of fashion, orders have been difficult to obtain, and there has been a good deal of short time and of making for stock. Towards the end of the year business improved a little, and some large sales of made goods were effected, while the new fawn waterproofs for men sent a little more work into the factories. On the whole 1898 cannot be said to have been a good year in this branch. The tyre trade has suffered in company with all industries dependent upon cycles, and the chief factor in this business, the Dunlop Company, having erected works of their own at Birmingham, their trade has been taken off the district, and thus has made the branch still more unsatisfactory. In general goods the consumption has been about normal, and manufacturers have had in that respect nothing to complain of. Prices, however, have been unremunerative, the raw material having been from 25 to 50 per cent. over the average for the last ten years; while only very trifling increases, even with concerted action, could be obtained for manufactured goods. Raw rubbers of the best quality (Para) began the year at 3s. 7d. per lb., but a steady advance carried the price up to 4s. 5d. in July; it receded a little from this position, and the year finishes with it at 4s. 1d. In February manufacturers advanced their prices 10 per cent., and a further 10 per cent. was put on in July. Meetings of the trade to improve its position were held in November, but one has not heard of any practical result. No new factories have been opened, but failures and unprofitable working have caused three or four to be closed during the year.

THE ENDOWMENT OF SCIENTIFIC RESEARCH.

QUARTER OF A MILLION OFFERED.

AN offer of a quarter of a million has been made by Lord Iveagh to the Council of the Jenner Institute, and its acceptance on behalf of that body by Lord Lister and Sir Henry Roscoe has been tendered in the following terms:—

British and Irish men of science have long deplored the fact that the opportunities in this country for research directed to the prevention of disease are not equal to those possessed by foreign nations. Lord Iveagh wishes to help in removing this reproach to our country, and on the conditions named below has offered the sum of £250,000. for the purposes of the highest research in bacteriology and other forms of biology as bearing upon the causes, nature, prevention, and treatment of disease. He has proposed to the Council of the Jenner Institute (lately the British Institute) of Preventative Medicine—a body which includes the leading men in medicine and allied sciences in the British Isles—that the donation shall be handed over to the institute on condition that in future the control and management of the affairs of the Institute shall be placed in the hands of a new board of seven trustees, three of the seven to be chosen by the council of the Institute, three by the donor, and one by the Council of the Royal Society.

The offer has been cordially accepted at a meeting of the Council. The donor further proposes that part of the new fund shall be appropriated to the enlargement of the buildings of the Institute at Chelsea, part to increasing the at present sadly inadequate salaries of the director and other members of the scientific staff, part to the expenses of administration and maintenance, and the remainder chiefly to founding valuable fellowships and studentships, tenable for limited periods, for research either in the laboratories of the Institute or in centres of outbreaks of disease, whether at home or abroad. The conditions on which these fellowships and studentships may be held are not yet determined upon, but it is hoped to open them to all classes of Her Majesty's subjects.

Lord Iveagh deserves the gratitude of the nation for thus munificently providing for the cultivation in the British dominions of biology and allied sciences for the good of mankind in an institution which thenceforth will compare favourably with any similar establishments in other parts of the world.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

INCOME-TAX REPAYMENTS.

(To the Editor of the Chemical Trade Journal.)

Sir.—As most of your readers who are engaged in business are now ascertaining the amount of their profits for the year 1898, will you allow us to remind them that, if such profits show a diminution, or are less than the amount upon which they have been assessed for Income-Tax, they may be entitled to the repayment of a considerable portion of the Income-Tax paid in respect of the same. In most cases that have come under our notice we have found that the reason why they have failed is that they have not furnished the Commissioners with proper accounts. Others, again, have neglected to keep any accounts of their business transactions. If proper accounts be kept, or even if a proper cash account be presented (which is very simple by using the "Tax-payers' Cash Book"), there is but little difficulty in establishing a claim.

The increase in the abatements now allowed in respect of incomes not exceeding £700. per annum renders it well worth while to take the little trouble necessary to keep a proper record of business transactions, as the relief granted to persons with small incomes is considerable. Thousands of people pay tax for which they are not liable, more particularly those whose incomes are derived from property and investments

Claims can in many cases now be made for four years, and the sum repayable might in the case of private incomes alone exceed £42 up to the end of the current financial year, to say nothing of tax allowed in respect of life insurance premiums, even when the income exceeds £700.

Yours, etc.,
The Income-Tax Adjustment Agency.
12 and 13, Poultry, London, E.C.,
December 28th, 1898.

ACETYLENE FOR LIGHTING PURPOSES.

A SERIES of four lectures has just been concluded by Professor Vivian B. Lewes, which were delivered to the Society of Arts, London. In his first lecture Professor Lewes said acetylene was first produced in 1836 by Edmund Davy, but it was not till twenty years afterwards that its chemical properties were studied by Berthelot. The gas has a density, as compared with air, of 0·92, and 100 volumes of water will absorb 110 volumes of the gas. Water, saturated with salt will, however, absorb only five volumes of the gas. Brine is, therefore, better than water for collecting the gas over, though it is found in practice that water may be used, as, after the top layer of water has been saturated with the gas, absorption proceeds but slowly. When acetylene was first produced on the commercial scale for lighting purposes, it was feared that it would attack the metal of gasfittings, especially copper, and form with them explosive compounds, but experiment has proved that this does not take place unless the metal is present in the form of a subsalt and the gas contains an excess of ammonia, conditions which are not likely to occur in practice. Acetylene is poisonous, but less so than water-gas or coal-gas. It can be liquefied by a pressure of 21½ atmospheres, but in the liquid form it is readily detonated, and for this reason dealing in the liquid form is prohibited. When burned the gas gives an intensely brilliant white light, by which colours can be distinguished as well as by daylight. A mixture of 3½ volumes of the gas with 96½ volumes of air is explosive, but the maximum explosive effect is obtained with 1 volume of acetylene and 12½ volumes of air.

In his second lecture, Professor Lewes dealt with the manufacture of calcic carbide, the raw material from which acetylene is produced. This material was known as long ago as 1862, but it was not till 1892 that T. L. Willson, a Canadian experimentalist, made it in quantity; and in that year he sent samples of it to Lord Kelvin. The first plant for the manufacture of carbide erected in this country was at Leeds, but now the greater part of the British make is produced at works at the Falls of Foyers. In the U. States carbide is being produced at the rate of between 10,000 and 12,000 tons per annum, while on the Continent works are in operation or in course of construction capable of producing about 60,000 tons of carbide per annum. The carbide is produced by heating in the electrical furnace a mixture of 68 parts by weight of metallurgical coke and 100 parts by weight of lime. Both lime and coke must be the purest obtainable. About 1·8 lb. of the mixture produces 1 lb. of carbide. The cost of material per ton of carbide will vary from £3. to £4., according to locality, and the cost of electrical power in this country if derived from waterfalls is about £4. per horse-power per annum. The yield of carbide per horse-power per hour is between 0·4 lb. and 0·5 lb. Attempts have been made to produce carbide without the aid of electricity, but hitherto without success. Calcium carbide is a crystalline semi-metallic looking body with a specific gravity of 2·22, and is composed of 62·5 parts of calcium and 37·5 parts of carbon. When brought in contact with water it is decomposed, acetylene gas being given off and lime left as a residue. A pound of carbide will give about 5 cubic feet of acetylene. The principal impurities found in acetylene generated from calcium carbide are ammonia, sulphuretted hydrogen, and phosphuretted hydrogen, the latter being dangerous on account of it being spontaneously inflammable when brought into contact with air. M. Gerard, chief of the Paris Municipal Laboratory, has studied the undecomposed residue of carbide, and after treating between 700 lb. and 900 lb. of carbide he obtained 0·154 grain of a diamond material. In concluding his second lecture, Professor Lewes said that there was no danger in the transport of carbide provided it was packed so as to keep it from moisture or moist air. The real risk is after a case has been opened, for in the presence of moist air the carbide will give off gas, and in the absence of proper ventilation an explosive mixture may be formed with the air of the store. Carbide should be packed in air-tight cases of sufficient strength to withstand rough usage in transport.

In his third lecture, he dealt with the methods of generating acetylene from the calcium carbide. To generate the gas it is only necessary to bring water into contact with the carbide. There are two main classes of generators in use—the automatic and the non-automatic. In the automatic the movements of a small gas-holder are caused to cut off the water when the holder is full. In the non-automatic a holder is provided sufficiently large to hold all the gas from one charge of carbide. Each class has its advantages and disadvantages; and the points to be aimed at in either are—(1) low temperature of generation; (2) complete decomposition of the carbide; (3) maximum evolution of gas; (4) low pressure in every part of the apparatus; (5) ease in charging and in removal of the residues; and (6) removal of all air from the apparatus before generation of gas.

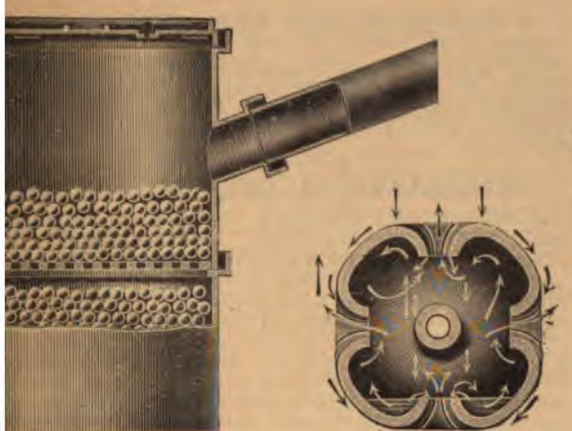
In his last lecture Professor Lewes spoke of the application of acetylene for purposes of illumination. The gas can be burned to the best advantage in burners consuming one cubic foot per hour, and such a burner will give a light of 32 candles, as against 16 candles per cubic foot of gas, which is the best result from coal gas used with incandescent mantles. Carbide of calcium costs at the present day about £20. per ton, which leads Professor Lewes to think that acetylene gas cannot be distributed at less than £3. per thousand cubic feet. Thus there is not the remotest chance of the new gas competing with coal gas and incandescent mantles. Where it will be found useful will be in villages and country houses where coal gas is not available. In this connection it is a much more hygienic light than either candles or oil lamps. For equal light candles would use up to 38½ volumes of oxygen and oil lamps 25 volumes, while acetylene will only use up 5 volumes. On the other hand, an incandescent gasburner, giving the same light, will use up only 3·1 volumes of oxygen. It has also been found that by mixing acetylene with coal gas or oil gas, for railway-carriage lighting, the illuminating power is vastly increased, and last year 3,000 tons of carbide were used in Germany alone for this purpose, and next year it is expected that 10,000 tons will be so used.

Lautaro Nitrate Company.—A dividend of 1s 6d. per share is notified. Compared with some of the returns recently published in our columns, this is a good dividend.

The Societe John Cockerill.—The annual report of this great Belgian company, recently issued, shows the payment of 2,000,000 fr. in dividends last year, after deducting all charges for depreciation, improvements and other accounts. The report says that the cost of coal has increased by 10 per cent. The cost of producing pig-iron has been sensibly affected by the increased price of coke, the increased output of the Spanish iron mines, the Spanish-American war, and the new tax on the exports of iron ore from Bilbao. The quantity of pig has been reduced, and the output of basic iron has been increased. With reference to the steel works, the price of rails has been kept low by the competition of the United States. The steel works have produced much the same quantity as in the previous year, and the exports of rails have been about 50,000 tons. The other products of the steel works have generally been sold at a better price. The new basic steel works have been working satisfactorily. The foundry department has been, and is, extremely active, and work is assured for a long time ahead. The new wheel, forge and merchant mills have also done well, while the engineering works have had an exceptionally brilliant career, and orders are in hand that will keep them employed for a considerable period. The new gun factory only awaits the installation of some tools to be completely equipped. The boiler works have done better than in any previous year, and have completed in all 131 boilers, land, locomotive and marine, while the shipbuilding works have produced 35 vessels in all, and have repaired 16 others, with good profits. The results achieved by this important company are therefore very satisfactory.

EW PACKING FOR REACTION TOWERS.

problem of finding the most suitable material for packing wers, in which gases are intended to interact with liquids, is ich constantly presents itself to the industrial chemist. All proposals have been put forward from time to time, but in the of cases coke and plain acid-resisting bricks continue to hold l against all comers. To Mr. Oscar Guttman, however, we indebted for a new and most ingenious contrivance which bids



stablish its utility, and of which we shall await further accounts terest. It consists of a hollow ball-shaped earthenware body vn in the accompanying cuts), which can be made of any desired t ordinarily has an outside diameter of 2¼ inches. It has six indentations, in each of which a hole is formed, and the shape hat, whatever the position in which the balls may be in the he liquid trickling over them is bound to run first down the

urface, and then find its way more or less inside, where it lates till the internal level rises to one of the holes already to. It is calculated that the surface per cubic foot afforded by cking amounts to 37·61 square feet, as compared with 16·42 feet in the case of coke, or with 14·42 as in the Lunge Plate

The balls are made by the Deutsche Steinzeugwaarenfabrik, richsfeld, in Baden, and the price f.o.b. London is quoted as r 100.

AUTOMATIC GAS METERS AND COOKERS

By Edward A. Harman.

As a side issue to the engineering world, the rapid development of the penny-in-the-slot system which has astonished the millions demands something more than a passing notice. Perhaps one of the most surprising adaptations is that for gas distribution. The enormous success of this system is possibly due, mainly, to the reasonable desire of the public for knowing what they are buying, the cash payment, and also to the immense popularity of the pennyworth.

To such a state of perfection have automatic gas meters been brought, it is impossible to foresee to what extent they will be ultimately extended. It is probable in the near future that different rooms, workshops, offices, etc. of the same institution will control the consumption of what is required for lighting and heating purposes by automatic interception meters, rather than allow an indefinite quantity of gas to be used without regard of cost, as in many cases existing at present. Such waste not only affects the cost of production of materials but also the health of the workers, which is of the first importance. It may be found advantageous where rooms are let as apartments in houses or hotels to allow each tenant to be responsible for their own amount of gas, in preference to the unsatisfactory fixed charges so generally made. For internal arrangements in workshops, slot meters might be employed by a mutual arrangement with the head of the department and the employees. Of course, in such a case, the meter would be the property of those directly concerned. The meters, being fixed in a passage or landing, can easily be available for examination and collection from time to time. In cases of illness the ready check afforded upon the consumption of a bedroom stove is a satisfactory element. Applications for automatic meters are so numerous that few gas undertakings can afford to be independent of the assistance afforded by them. It is not so much the financial side of the matter as revenue earners that has to be considered as the popularising of gas in every home, office, or workshop. It has recently been pointed out that for city and town offices a gas fire is, perhaps, as useful a system of heating as can well be used, no attention being required from the time the stove is lit in the morning to when it is turned off at night, thus saving not only time in this, but avoiding annoyance of too large or too small a fire, and other attendant inconveniences. For bedrooms gas fires are becoming increasingly popular. Where properly fixed and connected by a flue direct into the chimney, this method of heating is peculiarly suitable. The temperature of a room can be maintained most evenly night and day, which, in several cases of illness, is of immense importance, while the necessity for making the fire up and thereby disturbing a patient are dispensed with. There is, moreover, the additional important consideration that the fire is always available. To those affected with asthmatical, bronchial, or kindred complaints, this cannot afford to be disregarded, especially considering the liability of a sudden attack which often occurs in the middle of the night, when some hours must frequently necessarily elapse before a coal fire can be got ready. If this notice were from a medical point of view instead of from an engineering one, much might be said upon this subject. The omission of reference to the convenience obtainable in cases of illness would, however, render any notice of gas fires incomplete.

Many gas undertakings are now recognising the importance of giving every facility for supplying gas fires, are fixing them free of cost, and only making a nominal annual charge for the stove. The undertaking of which I have the honour to be the engineer is doing this with good results. In consequence of what has become to be known as the "fixed free" stove business, numerous stove and meter makers have been inundated with orders, the delays occasioned in consequence being vexing alike to the consumer and the gas officials. The method of calculating the desirability of adopting this penny-in-the-slot system is most simple. My experience is that for an ordinary automatic meter for lighting purposes only, the annual gas consumption therefrom equals 10,000 cubic feet, and where a small cooker is supplied this consumption is doubled. This quantity of gas at the profit on cost of manufacture per thousand will furnish the income available as interest on the small original outlay, depreciation, and the extra cost of collection. From 20 to 35 cubic feet of gas for a penny is the general charge. An ordinary flat flame burner consuming 5 feet per hour will thus last from 4 to 7 hours, or where an incandescent burner is used, consuming from 3 to 4 cubic feet per hour, the time the pennyworth will last is proportionately longer. Generally speaking gas undertakings supply fittings, burners, meter and stove free of cost, so that the consumers maximum liability is only one penny. The addition of a small cooking stove is as great a convenience, comparatively, in small class property as in large, where gas cooking stoves are considered well nigh indispensable.

Such a development in one of the branches of the great engineering profession is truly astounding.

Trade Notes.

Manchester Gas Tar.—Just as we were going to press last week news came to us of the letting of the Gaythorn works tar contract for one year from March 1st, 1899. The tar is now let upon a sliding scale, and the prices tendered include only the cost of working and carriage of the tar to the distiller's works. The committee have agreed to recommend the acceptance of Mr. Barrow's tender at 7s. 9d. per ton. The other tenders were :—Lord, 10s.; Hardman and Holden, 9s.; Lockwood, 8s. 10d ; Lee, 7s. 10½d.

An Official Bacteriologist.—The Glamorgan County Council have appointed a bacteriologist at a salary of £250 a year.

Society of Chemical Industry (*Nottingham Section*).—Erratum.—In the report of the paper by Mr. L. L. Lloyd and Dr. Sudborough, given on p. 400 of our last number, for phenil propionic acid read phenil propiolic acid throughout.

The Liebig Laboratory in Giessen.—A proposal is made in the "Chemiker Zeitung" to convert the Liebig Laboratory, which has already served many purposes, and the total destruction of which is threatened by the contemplated improvements in the railway station grounds—into a museum. An appeal is made to chemists generally to support this idea.

New Mercuric Antiseptic.—Mr. John Stewart, druggist, of Kirkcudbright, has, it is reported, after some fifteen years' research, prepared the long-sought-for antiseptic, hydrated persulphate of mercury. The qualities of the new material are, briefly, that they make it the best possible preparation of mercury as an antiseptic either or internal or external treatment.

Cremated in a Lime Kiln.—An inquest was held by the Monmouthshire coroner on Tuesday on some calcined remains found at Langston lime kilns, near Newport. The person had evidently gone to the kilns for warmth during the night, and been overcome by the fumes and absolutely cremated, only a few bones being recovered. The doctor who gave evidence was unable to determine the sex of the victim. This is the fifth death which has occurred at these kilns.

The "Erasmic" Annual.—We have received from Messrs. J. Crosfield and Sons, Ltd., Warrington, the well known makers of "Erasmic Herb" soap, a copy of their Erasmic Annual, which is tastily got up with coloured cover and illustrations, and with which is presented a handsome coloured plate. There are stories by Guy Boothby, Grant Allen, G. R. Sims, and others, all of which are well illustrated, in many cases by full page sepia sketches. From cover to cover the Annual is as dainty and excellent as the soap it is named after.

Explosives in Coal Mines.—The Home Secretary gives notice that on the 23rd December he made an order, under Section 6 of the Coal Mines Regulations Act, 1896, entitled "The Explosives in Coal Mines Order of 23rd December, 1898." This order amends the order of the 11th July last by revoking so much of the schedule of permitted explosives annexed to that order as relates to the explosive known as oxalate blasting powder, and by adding to the schedule the following new explosives : - Argus powder, earthquake powder, elephant brand gunpowder No. 2, and oxalate blasting powder (new definition). The order comes into force on Monday next.

Petroleum Fatalities.—Two fatal petroleum accidents are reported from Liverpool this week. Mary Alice Capstick, a single woman, lodging in Poplar-street, dropped a lamp whilst removing it from a mantelshelf. It exploded, and the poor woman was instantly enveloped in flames. She was so terribly injured that she died in hospital on Monday. In the second case, an old woman, Mary Ann Burnside, was found suffocated in bed in Abraham-street, after an outbreak of fire. The remains of a paraffin lamp were afterwards discovered, and it is supposed that it exploded and thus caused the conflagration.

The Will of Mr. Charles Lowe.—The executors of the will, which bears the date October 18, 1898, of Mr. Charles Lowe, of Summerfield House, Reddish, Hyde Hall, Denton, and of Eccleshall and Barmouth, of the firms of Charles Lowe & Co., of Reddish and elsewhere, and of F. C. Calvert & Co., Bradford, manufacturing chemists, who died on the 1st November last, are his widow, his two sons, and Mr. John Watkins Johnson, solicitor, Stockport. The late Mr. Lowe's personal estate has been valued at £148,977., and the gross value of the whole of his estate has been assessed at £173,347. The trustees are authorised to carry on any business in which he was engaged, and to take partners therein, and to transfer the business to a limited liability company, and to take not more than one-third of the *purchase money in* shares and debentures.

American Items.—The Read Phosphate Company has opened its new fertiliser plant in Nashville, Tenn. It has also a plant at Charleston, S. C., and makes special grades of fertilizers, beside importing and keeping for sale nitrate of soda, kainit, sylvinit, muriate and sulphate of potash.—The Canadian Oil and Coal Company, Limited, has applied for a Dominion charter to locate and develop petroleum wells and coal mines. The chief place of business is Montreal ; capital, $1,000,000. Incorporators: W. Strachan, J. W. Pyke, B. Shepherd, G H. Meldrum, Montreal, A. W. Cole, Albany, N.Y.—John Johnson & Company, of New York City, manufacturers of filter presses for treating gold slimes, etc., have received a big order from a well-known Western gold mining company for filter presses for use in a cyanide plant.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are firmer at 9d. for 90's and 50/90's, and might remain so were it not for the prospect of increased production in the near future. Carbolic acids are steady, though crude is a fraction lower at 1s. 11d. Naphthas are in fair demand, and consequently prices are steady. Pitch is very firm at 24s. 6d. f.o.b. East Goast, and 22s. 6d. West Coast.

Sulphate of ammonia seems to have been in no wise affected by the holidays, for the demand has continued steady, and prices have a hardening tendency. Closing prompt values are :—London outside makes, £10. 2s. 6d. ; Liverpool, £10 2s 6d. to £10. 5s. ; Hull, £10. 2s 6d. ; Leith, £10. 2s. 6d. to £10. 3s. 9d. Beckton, no quotation. For January - June delivery, £10. 5s. is lowest price acceptable.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is a fair amount of business doing on the whole, all the Lancashire factories being in full work. Bleaching powder maintains a more steady price, present price being £4. 10s., f.o.r. makers' works, and forward contracts 5s. per ton less. For export the prices rule from £5. to £5. 10s. hardwoods, f.o.b Liverpool, etc. Caustic soda is in fairly good demand, and prompt prices remain as quoted last week—viz., f.o.b. Liverpool, 77 % £7. 12s. 6d , 74 % £7. 7s. 6d., 70 % £6. 17s. 6d., 60 % £5. 17s. 6d. per ton. For forward delivery business continues to be booked at 5s. to 10s. per ton lower rates. Chlorate of potash and soda flat, and prices unaltered. Saltcake in bulk is in fairly steady request at 25s. to 26s. per ton f.o.r. Soda crystals and bicarbonate are unchanged. Ammonia alkali, 58%, is in good demand, and price held steady by the Convention at £4. 2s. 6d., bags, f.o.r., prompt or early delivery, or 5s. per ton less for 1899 contracts. Acetates, as a whole, are steady, and values are without material alteration. White powdered arsenic quiet, but market firm, at £16. to £16. 5s. per ton, Garston, according to brand. Borax still tends upwards in price. Sulphate of copper £18. 10s. prompt, and £19. for January-March delivery. Prussiates of potash and soda are in good request, and prices firm at 6¾d. and 4⅞d. per lb respectively. Sulphocyanides quiet and without alteration in values. Zinc salts are dearer. Sulphate of iron is tolerably abundant, and there is a good general demand. All ammonia salts are firm. For carbolic acids prices are steady, but there is only moderate inquiry.

REPORT ON MANURE MATERIAL.

The business of the week has been of a holiday character, and there is nothing very special to report.

Quotations for mineral phosphates all round are fully maintained, and there is a feeling that with the new year higher prices may be realised.

There is a strong demand for bone meal, and the value in all positions is fully £5. 2s. 6d. per ton, ex quay at the ports.

Nitrate of soda is firm at 7s. 6d. per cwt for ordinary, up to 7s. 9d. per cwt. for refined quality.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 49s. 5d. ; Middlesbrough, 44s. 4½d. cash ; and hematite, 57s. 2d. Copper firm: Chili bars, G. O. B.'s and G. M. B.'s, closed at £56. 18s. 9d. to £57. 3s. 9d. cash, and £57. 5s. to £57. 10s. three months. Tin steady : Straits closed at £84. 5s 0d. to £84. 15s. 0d. cash, and £85. 1s. 3d. to £85. 11s. 3d. three months ; Australian, £85. 0s. 0d. ; English ingots, £87. to £87. 5s. Lead dull : Spanish, £13. 1s. 3d. English, £13. 5s. ; Silesian spelter, ordinary, £23. 10s. to £23. 12s. 6d. Nickel, 1s. 2½d. Antimony, £37. Quicksilver : First hands, £7. 15s. ; second hands, £7. 14s. *Copper shares* steady : Cape, 4 3/16 to 4 5/16 ; Copiapo, 2⅝ to 2¾ ; Libiola, 1⅞ to 2⅛ ; Mason and Barry, 3⅛ to 3¼ ; Rio Tinto, 30 11/16 to 30 13/16 ; Tharsis, 7 15/16 to 7 16/16.

etc. The subscribers to the memorandum of association are:—J. B. Dampney, Dowlais Chambers, Cardiff, merchant; L. P. Coward, 1, East Grove, Cardiff, shipbroker; W. E. Jones, 26, Mt. Stuart-square, Cardiff, shipowner; W. H. Jones, Mt. Stuart-square, Cardiff, shipowner; W. B. Ronnfeldt, Mt. Stuart-square, Cardiff, coal exporter; S. A. Tyabjee, 16, Upper Addison Gardens, W., gent; J. M. Lickfold, 33, Brunswick-square, W.C., secretary.

Parker, Gray, & Co. Ltd.—Capital £10,000. in £10. shares. This company has been formed to acquire the business of a tallow-chandler, fellmonger and oil merchant, carried on at Northampton by P. Gray, as Parker Gray & Co., and to carry on the business of candle, soap, glue, size, and glycerine manufacturers, oil and colourmen, leather dressers, etc. P. Gray is the sole director. Qualification, 200 shares. Remuneration as fixed by the company.

IMPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 17th.

Acetic Acid—
Holland, 20 pks. A. & M. Zimmermann
,, 78 Phillipps & Graves

Acetone—
France, 13 dms. Thames S. T. & L. Co., Ltd.

Acids—
Holland, 49 pks. Little & Johnston

Alum—
Holland, 1,083 pks. J. White

Alumina Sulphate—
Germany, 300 bgs. H. Lambert

Ammonium Phosphate—
Holland, 12 cks. C. Lamb & Co.

Aniline Salts—
Holland, 2 pks. Brooke, Simpson & Co.

Antimony—
Japan, 20 t. R. Warner & Co., Ld.

Antimony Ore—
France, 85 t. H. R. Merton & Co.

Asbestos—
Holland, £5 Robinson, Roberts & Co.
,, 21 Becker & Wagner
Italy, 44 W. H. Mitchell
,, 210 W. Byford
,, 650 British Asbestos Co.

Barytes—
France, 3 pks. Burnett Brs. & Sons
Germany, 48 P. Jantzen
Belgium, 18 Leach & Co
,, 43 W. Harrison & Co.
,, 18 Z. Cartwright, Ld.
Germany, 114 J. L. Lyon & Co.
Holland, 20 J. Owen

Bleaching Powder—
France, 246 cks. J. M. Steel & Co.

Bone Meal—
E. Indies, 100 t. Packard & Co.
,, 100 Hollinghurst & Co.
,, 100 Fox, Roy & Co.
,, 100 A. Hunter & Co.

Bones—
Persia, 27 t. A. Frey & Co., Ld.

Boracic Acid—
Italy, £43 G. Boor & Co.

Caoutchouc—
Straits, 40 c. Butler's Wf., Ld.
Zanzibar, 13 L. & I. D. Jt. Co.
Aden, 12 Wallace Brs.
E. Indies, 4 Gray & Sons
Sydney, 19 McIlwraith, McEacharn & Co.
Holland, 18 A. C. Lloyd
France, 158 Procter Brs.
Straits, 136 Vokins & Co., Ld.
,, 482 Huttenbach & Co.
E. Indies, 4 L. & I. D. Jt. Co.
P. E. Africa, 30 ,,
Madagascar 70 Procter Brs.
Straits, 700 Jewesbury & Co.
,, 600 Soundy & Sons

Carbolic Acid—
Germany, 150 pks. Blagden, Waugh & Co.
,, 25 J. G. Back

Castor Oil—
France, 15 cks. F. Bochin
Ceylon, 105 Cayzer, Irvine & Co.
Germany, 1 cs. Christy & Co.
Belgium, 50 brls. C. & E. Morton

Caustic Potash—
Germany, 80 pks. J. M. Steel & Co.
8 cks.
,, 38 D. T. Domeier & Co.

Chemicals (*otherwise undescribed*)
Germany, £99 L. & I. D. Jt. Co.
,, 915 A. & M. Zimmermann
France, 45 Mory & Co.
Holland, 33 T. H. Lee
,, 380 H. Harkness
,, 10 Hernu, Peron & Co., Ld.
Queensland, 360 L. & I. D. Jt. Co.
Germany, 61 Butler's Wf., Ld.
,, 45 Craven & Co.
,, 514 H. Lorenz
,, 20 A. F. White & Co.
,, 50 H. Lambert
Norway, 154 R. Greening
Holland, 10 Deering & Robottom
Belgium, 1,136 T. H. Lee
,, 40 John Cockerill Line
Germany, 7 T. H. Lee

Chlorine—
Germany, £30 A. & M. Zimmermann

Cream of Tartar—
France, 13 pks. F. C. Devon & Co.
,, 2 W. Balchin, Ld.
Belgium, 10 Sawyer, Sons & Co.
Spain, 5 F. C. Devon & Co.
,, 2 W. E. Paulin
France, 5 C. Atkins & Nisbet
,, 2 H. Johnson & Sons

Dyestuffs—
Argols
Italy, 1,931 pks. B. Jacob & Sons
,, 62 Thames S. T. & L. Co., Ld.

Extracts
France, 25 pks. Boutcher, Mortimore & Co.
U. States, 50 Skilbeck Brs.
Germany, 100 J. Greig
,, 220 Butler's Wf., Ld.
U. States, 50 Union L. Co., Ld.
,, 12 J. W. & S. A. Smith
France, 211 Beresford & Co.
,, 8 Union L. Co., Ld.
Germany, 5 J. Norrenberg & Co

Gambier
Straits, 2,315 pks. P. & O. Co.
,, 336 J. Grieg
,, 498 S. Figgis & Co.
,, 248 J. R. Francis & Co.
,, 1,408 Hoare Wilson & Co.
,, 499 Adamson, Gilfillan & Co.
,, 65 Beresford & Co.
Japan, 84 Dundee, Perth, & London S. Co.

Indigo
E. Indies, 22 chts. Parsons & Keith
,, 6 6 cs. Kaltenbach & Schmitz.
,, 50 J. W. Cook & Co., Ld.
,, 4 A. Young & Co.
,, 2 Croysdale & Co.
France, 1 L. & I. D. Jt. Co.
U. States, 15 srns. W. J. & H. Thompson

Myrabolams
E. Indies, 1,482 pks. Ralli Brsl
,, 683 H. J. Perlbach & Co.
,, 4,096 W. Shelcott & Sons

Orchella
Germany, 168 pks. F. Huth & Co.
France, 95 Prop. Bull Wf.

Saffron
E. Turkey, 2 pks. L. & I. D. Jt. Co.

Shumac
Italy, 2,600 pks. J. Kitchen, Ld.
,, 50 Harris & Co.
,, 50 H. Johnson & Sons
,, 68 R. Waters
,, 500 Beresford & Co.
,, 50 Boutcher, Mortimore & Co.
,, 440 Lon. & Til. Ltge. C. & D. Co., Ld.

Tanners' Bark
Belgium, 10 t. Leach & Co.
Natal, 2 Boutcher, Mortimore & Co.

Turmeric
E. Indies, 300 t. L. & I. D. Jt. Co.

Farina—
France, 2 pks. E. Flageollet & Co.
U. States, 146 Wingate & Johnston
Germany, 50 J. Knill & Co.
,, 50 J. Barber & Co.
Holland, 170 ,,

Glucose—
France, 200 pks. 200 c. C. Barnard
U. States, 850 1,091 t. ,,
,, 250 250 Beck & Pollitzer
,, 1,405 1,880 L. & I. D. Jt. Co.
,, 50 991 L. & Til.
,, 50 L. C. & D Co.
,, 100 300 Page, Son & East
,, — 570 Soundy & Sons
,, — — R. G. Hall & Co.
,, 100 600 E. & T. Pink
,, 100 570 W. Grose & Co.
Holland, 40 40 J. Barber & Co.
France, 515 5 5 W. E. Cole
Germany, 200 200 Baxter & Hoare
U. States, 150 927 Ohlenschlager Brs.
,, 100 554 Deering & Robottom
Germany, 15 140 J. Knill & Co.

Glue—
Germany, £315 L. & I. D. Jt. Co.
France, 26 Mory & Co.
Holland, 25 T. H. Lee
,, 16 Phillipps & Graves
Belgium, 58 T. Ronaldson & Co.
France, 103 Prop. Hay's Wf.
U. States, 228 Armour & Co.
Holland, 9 A. G. Robinson & Co.
Germany, 28 Butler's Wf., Ld.
,, 75 Phillipps & Graves
Belgium, 630 J. Barber & Co.
France, 79 Mory & Co.
Germany, 20 Tough & Henderson
France, 220 W. S. Croak
Italy, 140 J. Knill & Co.

Glue Stock—
Sydney, 141 bls. Goad, Rigg & Co.
,, 21 Low, Sons & Bedford
Holland, 10 Elkan & Co.
Belgium, 81 R. Davies & Co.
,, 91 D. C. Thomas & Sons
Germany, 8 Butler's Wf., Ld.
Sydney, 5 Hicks, Nash, & Co.
Italy, 12 Beresford & Co.
E. Indies, 47 Henderson Brs.
Ceylon, 130 J. W. Cook & Co., Ld.
Germany, 56 Hicks, Nash & Co.

Glycerine—
Holland, £500 J. Barber & Co.

Guano—
Belgium, 3 t. Prasckkauer & Co., Ld.

Gypsum—
Germany, 40 t. Brasch & Rothenstein

Iron Oxide—
Channel Is., 190 t. Gas Purification Co.

Kainit—
Germany, 50 t. T. W. Berk & Co., Ld.
,, 55 Perkins & Homer

Lead Acetate—
Germany, £45 Bullard, King & Co.

Litharge—
Germany, 8 pks. J. Barber & Co.
,, 6 H. Lambert

Mercury—
Italy, 500 btls. L. & I. D. Jt. Co.
,, 200 flks. H. Bath & Son

Methyl Alcohol—
France, 20 dms. E. Cail & Co.
,, 9 Lister & Biggs

Molasses—
U. States, 500 cks. 3,020 c. J. Forsey
,, 490 2,550 J. W. Cook & Co., Ld.
Egypt, 550 2,900 ,,
,, 424 2,344 L. & I. D. Jt. Co.
Holland, 1,079 5,440 J. R. Francis & Co.

Naphtha—
Germany, 23 dms. Tingle, Jacobs, & Co.

Nickel Salts—
Holland, £40 R. W. Greeff & Co.

Ochre—
Holland, 14 pks. Phillipps & Graves
France, 430 W. Harrison & Co.

Paraffin Scale—
U. States, 3,439 brls. Anglo-American Oil Co.

Paraffin Wax—
U. States, 494 cs. Anglo-American Oil Co.
,, 100 brls. H. Hill & Sons

Phosphate Lime—
Belgium, 200 t. Anglo-Contl. Guano Works
,, 50 C. A. & H. Nichols
,, 195 West & Penrose

Phosphate Rock—
U. States, 2,490 t. Hine Brs. & Willis

Pitch—
Germany, 50 brls. H. Hunt
,, 51 cks. Calender's Cble. & Con. Co.
,, 118 Linck, Moeller, & Co.
Russia, 68 brls. F. & S. Chiesman & Co.
France, 29 W. E. Cole

Plumbago—
U. States, 67 pks Lunham & Moore
Belgium, 30 bgs. Brit. Anti-Fouling C. & P. Co.
Ceylon, 138 brls. J. Thredder, Son, & Co.
,, 104 Marshall & French
,, 51 Morgan Crucible Co.
,, 85 Union L. Co., Ld.
Germany, 46 cks. B. Gallaway

Potassium Bicarbonate—
Germany, 21 c. H. Lambert
Holland, 9 cks A. & M. Zimmermann

Potassium Bromide—
Germany, £103 R. W. Greeff & Co.

Potassium Carbonate—
Germany, 120 c. Petri Brs.
,, 200 Howards & Sons
France, 114 W. E. Cole
,, 120 Soundy & Sons
Canada, 97 Charles & Fox

Potassium Cyanide—
Germany, 20 cs. Blagden, Waugh, & Co.

Potassium Permanganate—
Holland, 5 kgs. R. W. Greeff & Co.
Germany, 20 cks. H. Lorenz

Potassium Prussiate—
France, 18 cks. Blagden, Waugh, & Co.

Potassium Sulphate—
Germany, 200 bgs. F. W. Berk & Co., Ld.

Pyrites—
Spain, 2,077 t. C. Tennant, Sons, & Co.
,, 1,564 Naylor, Benzon, & Co.

Rosin—
U. States, 1,000 brls. Moore & Hulc
Holland, 4 J. Owen

Rosin Oil—
Germany, 25 pks. D. Smith

Salicylic Acid—
Germany, 1 pk. Butler's Wf., Ld.
Saltpetre—
E. Indies, 500 bgs. Perkins & Homer
Holland, 30 cks. P. Hecker & Co.
Germany, 30 R. W. Greeff & Co.
" 42 J. Hall & Son, Ld.
Soap—
Italy, £980 W. Balchin, Ld.
Holland, 53 Phillipps & Graves
Belgium, 30 T. H. Lee
France, 21 A. Allan & Co.
U. States, 191 Lunham & Co.
Soda Ash—
Holland, 2,060 c. R. Waters
Sodium Hyposulphite—
Holland, 500 c. R. W. Greeff & Co.
" 18 cks. J. Owen
Sodium Phosphate—
Germany, 6 c. A. & M. Zimmermann
Sodium Prussiate—
Belgium, 52 cks. Blagden, Waugh, & Co.
Starch—
Holland, 1,402 pks. Little & Johnston
" 80 Phillipps & Graves
" 40 Hernu, Peron, & Co., Ld.
Belgium, 385 F. Claydon & Co.
" 270 Becker & Wagner
" 205 T. H. Lee
" 63 Leach & Co.
" 462 T. Ronaldson & Co.
Germany, 6 Butler's Wf., Ld.
" 300 Seaward Brs., Ld.
" 100 Phillipps & Graves
U. States, 250 C. Tennant, Sons, & Co.
" 400 Union Ltge. Co., Ld.
" 2,600 R. G. Hall & Co.
Stearine—
Belgium, 638 pks. H. Hill & Sons
" 7 cks. "
" 63 W. H. Mitchell
France, 60 pks. H. Hill & Sons
U. States, 97 cks. L. & I. D. Jt. Co.
" 3 Lunham & Moore
Talc—
E. Indies, £165 E. Davis & Co.
" 2,985 W. M. Smith & Sons
U. States, 60 W. Dixon
Tar—
N. Russia, 44 brls. M. Dk. Co.
" 74 Linck, Moeller, & Co.
" 39 Mordaunt Brs.
Portugal, 43 Union Ltge Co., Ld.
Tartar—
Italy, 7 pks. A. E. Piggott
Tartaric Acid—
Holland, 4 pks. Kirkpatrick, Barr, & Co.
" 2 F. C. Devon & Co.
Belgium, 10 B. & F. Wf. Co., Ld.
" 4 J. Harrison
" 4 F. C. Devon & Co.
Ultramarine—
Belgium, 20 pks. J. Harrison
Verdigris—
France, 3 pks. Kemp & Son
Waste Salt—
Germany, 50 t. Soundy & Sons
White Lead—
Belgium, 46 pks. J. L. Lyon & Co.
" 23 Perkins & Homer
" 8 J. E. Kitton
" 57 T. & W. Farmiloe, Ld.
" 37 J. W. Cook & Co., Ld.
Germany, 20 H. B. Alder & Co.
Holland, 51 Randall Brs.
" 39 Burrell & Co.
" 50 Phillipps & Graves
" 11 M. Ashby, Ld.
" 70 F. G. Clifford
Wood Pulp—
Sweden, 4,136 pks. Henderson, Craig, & Co.
" 400 Tough & Henderson
" 272 W. D. Cork
" 204 Erith & Dartford L. Co.
Germany, 1,000 E. J. & W. Goldsmith
" 6 Butler's Wf., Ld.
" 812 W. Friedlaender
Holland, 44 Thames S. T. & L. Co., Ld.
Norway, 260 Becker & Co.
" 288 W. G. Taylor & Co., Ld.
" 200 Johnsen & Jorgensen
Canada, 1,799 Becker & Co.
Belgium, 2,088 F. Heydemann
" 40 J. W. Cook & Co. Ld.

Zinc Oxide—
Germany, 1 pk. Drolenvaux & Bremner
Holland, 100 Burrell & Co.
" 160 M. Ashby, Ld.
" 10 J. Matton
" 20 R. W. Greeff & Co.
France, 10 Kerestedji & Co
Belgium, 2 Sawer, Sons, & Co.
Zinc Sulphate—
Germany, £61 Burgoyne & Co.
Sweden, 27 M. Dk. Co.

LIVERPOOL.

Week ending December 15th.

Albumen—
Naples, 7 cs. D. Mangus
Antimony Ore—
Antofagasta, 910 bgs.
Barytes—
Rotterdam, 22 bls.
Bones—
Maranham, 220 bgs. H. Evans & Co.
Acre, 316 R. A. Beaver & Co.
Boracic Acid—
Leghorn, 59 cks. 1 brl.
Borate of Lime—
Valparaiso, 2,124 sks. Hainsworth, Watson, Graham, Rowe & Co.
" 1,875 sks.
Borax—
Leghorn, 58 brls.
Castor Oil—
Genoa, 10 cs.
" 40 Evans, Sons & Co.
Leghorn 35
Genoa, 10 C. Schneider & Co.
Chemicals (*otherwise undescribed*)
Monrovia, 2 cs. French & Co.
Rotterdam, 2
Citric Acid—
Messina, 10 cks.
Colours—
Stettin, 50 cks.
Hamburg, 9
Rotterdam, 251
Cottonseed Oil—
New York, 305 brls.
Cream of Tartar—
Oporto, 5 cks.
Tarragona, 8 brls.
St. Nazaire, 1
Bordeaux, 121
Barcelona, 2 bckts. J. & L. Sitzler
Dyestuffs—
Argols
Bordeaux, 47 cks.
Leghorn, 1
Cochineal
Gd. Canary, 10 bgs. Canary Islands Trading Co.
Extracts
New York, 50 brls. McArthur & Co.
Boston, 30
Fustic
Hamburg, 443 pks.
Madder
Smyrna, 5 bls.
Rotterdam, 1 ck.
Orchella
Guayaquil, 26 bls. Rosing Brs. & Co.
Saffron
Valencia, 3 cs.
Shumac
Palermo, 2,350 bgs.
Valonia
Smyrna, 260 bgs.
Dyestuffs (*otherwise undescribed*)
Guayaquil, 37 pks.
Farina—
Fiume, 100 bgs.
Hamburg, 20
Rotterdam, 50
Glucose—
Boston, 350 brls. R. W. Forbes & Son
St. John's, N.B., 100
Glue—
Rotterdam, 200 bgs.
St. Nazaire, 20 cks. 20 cs.
Boston, 11 cets. T. Robinson & Son
Infusorial Earth—
Hamburg, 285 bgs.
Lactic Acid—
Boston, 12 brls. J. Taylor & Co.
Lithopone—
Hamburg, 8 cks.
Manure—
Halifax, 4 bxs. Hayward & Son
Mercury—
Lisbon, 1 bx.
Ochre—
Alicante, 100 sks.
Boston, 1 ck. Pearson & Kelly
Paint—
Malta, 1 kg.
Paraffin Scale—
New York, 548 brls. Thompson & Bedford
Phosphate Rock—
Pensacola, 768 t. Comp. C. Phos. des Paris
Pitch—
Guayaquil, 20 cs.
Potash—
Stettin, 10 cks. Bancroft & Co.
Rotterdam, 78
Hamburg, 7
Pumice Stone—
Leghorn, 13 cs.
Messina, 30 bgs.
Pyrites—
Huelva, 2,891 t. Matheson & Co.
Salt—
Bremen, 1 ck. 1 cs.
Saltpetre—
Hamburg, 25 kgs.
Soap—
Leghorn, 10 bxs. W. Underwood
Rotterdam, 11 cs.
Bordeaux, 3
Soapstone—
Bordeaux, 220 bgs. Geo. G. Blackwell, Sons & Co.
Sodium Nitrate—
Taltal, 7,316 sks.
Junin, 7,502 bgs.
Starch—
Philadelphia, 798 bgs.
Boston, 200
" 300 L. Sutro & Co.
Hamburg, 152 cs.
Stearine—
Rotterdam, 27 bgs.
Boston, 600 tcs.
Sulphur—
Catania, 67 brls.
Sulphur Oil—
Palermo, 90 kgs.
Tallow—
Philadelphia, 350 tcs.
Boston, 65
New York, 100 hhds.
Baltimore, 141 tcs.
St. John, N.B., 300 T. M. Marc & Co.
Portland, M., 500 brls.
Tartaric Acid—
Rotterdam, 10 cks.
Ultramarine—
Hamburg, 3 cs.
Waste Salt—
Hamburg, 63 bgs.
White Lead—
Rotterdam, 59 cks.
Wood Pulp—
Rotterdam, 20 pks
Zinc Ashes—
Philadelphia, 49 brls.
Zinc Oxide—
New York, 50 brls.
Zinc White—
Stettin 25 cks.

MANCHESTER.

Week ending December 17th.

Acetate of Lime—
New York, 1,822 bgs.
Albumen—
Hamburg, 5 cs.
Ammonium Oxalate—
Hamburg, 1 ck.
Antimony Salts—
Hamburg, 8 cks.
Asbestos—
Rotterdam, 3 bls.
Barium Chloride—
Hamburg, 22 cks.
Barytes—
Rotterdam, 11 cks.
Colours—
Hamburg, 2 cks. 1 cs.
Rotterdam, 73 51 7 bxs. 127 brls.
Cottonseed Oil—
New York, 157 brls.
Cream of Tartar—
Rotterdam, 20 kgs.
Dextrine—
Stettin, 260 bgs. W. H. Stott & Co.
Dyestuffs (*otherwise undescribed*)
Antwerp, 740 bgs.
New York, 10 bls.
Extracts—
New York, 20 brls. 35 cs.
Farina—
Hamburg, 450 bgs.
Stettin, 3,150 W. H. Stott & Co.
" 2,050 Browne, Geveke, & Co.
Glue—
Hamburg, 5 bgs.
Rotterdam, 15 cks. 16 cs.
Litharge—
Rotterdam, 3 cks.
Lithopone—
Rotterdam, 22 cks.
Logwood—
Cape Hayti, 625 t.
Magnesium Carbonate—
Rotterdam, 10 cs.
Magnesium Sulphate—
Valencia, 1 bx.
Ochre—
Hamburg, 16 cks.
Oxalic Acid—
Rotterdam, 15 cks.
Paraffin Scale—
New York, 1,000 brls. 100 cs.
Pitch—
Hamburg, 56 cks.
Potash—
Hamburg, 30 cks.
Rotterdam, 30
Potassium Chloride—
Hamburg, 59 cks.
Potassium Permanganate—
Hamburg, 5 cks.
Pumice Stone—
Rotterdam, 5 cs.
Saltpetre—
Hamburg, 40 kgs.
Sodium Nitrate—
Rotterdam, 4 cks.
Sodium Phosphate—
Antwerp, 10 cks.
Starch—
Antwerp, 40 cs 33 pks
Hamburg, 140
Montreal, 230 bgs.
Rotterdam, 80
Stearine—
Rotterdam, 13 bls.
Stearine Pitch—
Hamburg, 50 cks.
Sulphuric Acid—
Rotterdam, 16 cks.
Tannic Acid—
Hamburg, 4 cs.
Tartaric Acid—
Hamburg, 8 cks.
Rotterdam, 6
Tin Chloride—
Antwerp, 8 cks.
Ultramarine—
Rotterdam, 4 cks.
Waste Salt—
Hamburg, qty.
White Lead—
Antwerp, 8 cks.
Rotterdam, 23
Wood Pulp—
Christiania, 880 bls.
Drammen, 2,422 488 pks.
Gothenburg, 3,375
Hamburg, 400
Sarpsborg, 2,146 Kellner Partington Paper & Pulp Co

Stettin, 940 pks. W. H. Stott & Co.

Zinc Ashes—
Stettin, 28 cks. W. H. Stott & Co.

Zinc Oxide—
New York, 200 brls.

HULL.

Week ending December 17th.

Acids—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co

Barytes—
Antwerp, 104 cks. Bailey & Leetham, Ld.
Bremen, 12 Veltmann & Co.
" 38 Sissons Brs. & Co.
" 22
" 700 bgs. Storry, Smithson, & Co.

Castor Oil—
Leghorn, 20 cs.
Marseilles, 73 brls. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise unaescribed)*
Antwerp, 15 bgs. Wilson,
133 cks. Sons, & Co., Ld.
Bari, 46 "
Danzig, 46
Leghorn, 18 "
" 4 pks
Naples, 22 cs.
Rotterdam, 5 cks. Hull & Netherlands S. S. Co.

Chromium Flouride—
Rotterdam, 10 cs. Hull & Netherlands S. S. Co.

Colours—
Antwerp 88 pks. Wilson,
3 cs. Sons & Co., Ld
Bremen, 8 J. Pyefinch & Co.
Rotterdam, 118 brls. Hull & Netherlands S. S. Co.
10 bxs.

Cottonseed Oil—
New York, 237 brls. Wilson, Sons, & Co., Ld.

Cresylic Acid—
Hamburg, 1 carby. Sissons Brs. & Co.

Cryolite—
Copenhagen, 3 cks. Wilson, Sons, & Co., Ld.

Dextrine—
Stettin, 100 bgs. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam { 13 pks. 1 brl. 1 ck. } Hull & Netherlands S. S. Co.
Shumac
Palermo, 1,180 bgs. Wilson, Sons, & Co., Ld.
Valonia
Smyrna, 10 995 c.

Dyestuffs *(otherwise undes.)—*
Antwerp, 6 6 bgs. Wilson, Sons, & Co., Ld.

Farina—
Harlingen, 130 bgs. Hull & Netherlands S. S. Co.

Glucose—
New York, 152 brls.
Rotterdam, 40 bgs. Hull & Netherlands S. S. Co.

Glue—
Dunkirk, 4 cks. Wilson, Sons, & Co, Ld.
Rouen, 24 pks. "

Guano—
Drontheim, 208 bgs. Wilson, Sons, & Co., Ld.

Limestone—
Antwerp, 1 crte. Wilson, Sons & Co., Ld.

Nickel Salt—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.

Ochre—
Marseilles, 14 cks.
Rotterdam, 2 brls. Hull & Netherlands S. S. Co.

Paint—
Trieste, 20 pks. Wilson, Sons, & Co., Ld.

Phosphates—
Bona, 1,000 t.
Ghent, 160

Pumice Stone—
Messina 10 cks.

Rosin—
Savannah, 2,630 brls.
Wilmington, 4,200

Soap—
Marseilles, 10 cs. Wilson, Sons. & Co., Ld.

Starch—
Bremen, 1,086 cs. Veltmann & Co.
Ghent, 127 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 50 bgs. Wilson, Sons, & Co., Ld.

Sulphur—
Copenhagen, 20 cks.

Sulphuric Acid—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Tallow—
Dunkirk, 212 cks. Wilson, Sons, & Co., Ld.
New York, 70 tcs. "

Tar—
Wilmington, 7,000 brls.

Turpentine—
Savannah, 7,000 brls.

Ultramarine—
Bremen, 22 cks.
Rotterdam, 12 Hull & Netherlands S. S. Co.

White Lead—
Amsterdam, 46 cks. Hull & Netherlands S. S. Co.
Antwerp, 33 Bailey & Leetham, Ld.
Rotterdam, 64 cks. Hull & Netherlands S. S Co.

Wood Pulp—
Christiania, 1,646 bls. Monge & Co.
Drontheim, 400 Wilson, Sons, & Co., Ld.
Gothenburg, 410

GLASGOW.

Week ending December 22nd.

Aniline Salts—
Rotterdam 8 cs. J. Rankine & Son
1 ck.

Barium Sulphate—
Antwerp, 68 cks. 150 bgs

Barytes—
Rotterdam, 24 cks. J. Rankine & Son

Bleaching Powder—
Rotterdam 45 cks. J. Rankine & Son

Chemicals *(otherwise undescribed)*
Hamburg, 1 cs.
Rotterdam, 6 cks. J. Rankine & Son

Colours—
Rotterdam, 11 brls. J. Rankine
4 bxs. 54 pks. & Son
Hamburg, 4 cks. 4 cs.

Dyestuffs—
Alizarine
Rotterdam, 21 cks. J. Rankine & Son
Aniline
Rotterdam, 6 cks. J. Rankine
10 cs. & Son
Aniline Colours
Hamburg, 3 cks. 4 cs.
Argols
Bordeaux, 41 cks.
Extracts
New York, 12 brls.

French Chalk—
Fiume, 7 bgs. Robertson, M'Intosh & Co.
" 43 P. M'Intosh
" 300 W. Cumming & Co.

Glucose—
Portland, M., 50 brls.
New York, 100

Glue—
New York, 42 crts. 10 pks.
Rotterdam, 65 bgs. J. Rankine & Son

Litharge—
Rotterdam, 3 cks. J. Rankine & Son

Manganese—
Rotterdam, 4 cks. J. Rankine & Son

Paraffin Scale—
Baltimore, 100 brls.

Paraffin Wax—
New York, 20 cs.

Potash—
Hamburg, 23 dms.

Saltpetre—
Hamburg, 5 cks. 80 cs.

Soap—
New York, 2,500 bxs.
Trieste, 77 cs.

Starch—
New York, 1,700 sks.
Fiume, 30 bgs.
Rotterdam, 20 cs. J. Rankne & Son

Tartar—
Bordeaux, 7 cks.

Varnish—
New York, 136 brls
Antwerp, 2 cs.
Rotterdam, 1 J. Rankine & Son

Waste Salt—
Hamburg; 101,277 kgs.

White Lead—
Rotterdam, 62 cks. J. Rankine & Son

Wood Pulp—
Christiania, 360 bls

Zinc Oxide—
New York, 255 brls.
Antwerp, 33 cks.

Zinc White—
Rotterdam, 35 cks. J. Rankine & Son
10 pks.

TYNE.

Week ending December 17th.

Ammonium Chloride—
Rotterdam, 7 cks. Tyne S. S. Co.

Barytes—
Rotterdam, 61 cks. Tyne
50 bgs. S. S. Co.

Colours—
Rotterdam, 1 ck. Tyne S. S. Co.

Paraffin Scale—
New York, 90 brls. C. Hassell & Son

Starch—
Rotterdam, 140 cs. Tyne S. S. Co.

Tartaric Acid—
Rotterdam, 20 cks. Tyne S. S. Co.

Ultramarine—
Antwerp, 4 cks. Tyne S. S. Co.

Wood Pulp—
Christiania, 480 bls.
Laurvig, 25
Risor, 450

Zinc Chloride—
Rotterdam, 20 tins Tyne S. S. Co.

Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending December 14th.

Alizarine—
Rotterdam, 204 cks. 11 cs.

Barytes—
Rotterdam { 23 cks. 60 bgs.

Colours—
Hamburg, 3 cs.

Dyestuffs *(otherwise undes.)—*
Antwerp, 3 brls.
Amsterdam, 10 cks. 2 cs.
Boulogne, 6 1 36 pks.
Rotterdam, 730 138

Farina—
Delfszyhl, 550 bgs.
Hamburg, 208

Glue—
Hamburg, 10 cks.

Logwood—
Hayti, 630 t.

Potash—
Hamburg, 20 cks.

Pyrites—
Seville, 1,075

Saltpetre—
Antwerp, 85 bgs.
Hamburg, 10 cs.
Rotterdam, 200

Stearine—
Rotterdam, 1 bg.

Tartar—
Hamburg, 10 kgs.

Waste Salt—
Hamburg, { 1,124 cks. 80 .

GRIMSBY.

Week ending December 17th.

Caoutchouc—
Antwerp. 1 cs.
Hamburg, 5

Chemicals *(otherwise unaescribed)*
Antwerp, 5 cks.
Hamburg, 5 9 cs. 2 pks.

Colours—
Antwerp, 11 cks. 77 pks.
Hamburg, 42 8 cs. 175
Rotterdam, { 1 1 11 89 bgs.

Dyestuffs *(otherwise undescribed)*
Dieppe, 5 cks.

Farina—
Hamburg, 100 bgs.

Glue—
Hamburg, 10 bgs.

Indigo—
Rotterdam, 7 cs.

Limestone—
Antwerp, 6 crts.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 21st.

Acids—
Calcutta, 15 cs. £27
St. Helena, 6 15
Bombay, 5 13
Lisbon, 9 pks. 1

Alkali—
Durban, 6 c. £9

Ammonia—
Antwerp, 20 cs. £70
Calcutta, 17 12
Cape Town, 19 35

Ammonium Carbonate—
Hamburg, 6 c. £15
New York, 15 kgs. 20
Rotterdam, 17 26
B. Ayres, 11 30

Ammonium Chloride—
Danzig, 1 t. 3 c. £31
Constantinople, 1 32
Salonica, 2 5 70
Rotterdam, 30 cks. 178

Ammonium Sulphate—
Berbice, 25 t. £250
Hamburg, 50 475
Martinique, 193 3 c. 1,943
Bremen, 50 475
Mauritius, 255 2,540
Jersey, 6 15 79
Antwerp, 50 18 490

Arsenic—
Napier, 3 t. £33
New York, 587 brls. 1,610

Borax—
E. London, 3 t. 10 c. £65
Delagoa Bay 5 cs. 10
Caustic Soda—
Napier, 13 c. £20
Singapore, 3 6
Auckland, 1 t. 13
Chemicals *(otherwise undescribed)*
Brisbane, 9 pks. £12
Bombay, 19 cs. 80 330
Copenhagen, 10 cks. 28
Sydney, 3 18 83
Wellington, 16(pt).11 21
Melbourne, 4 10
Brussels, 13 40
Yokohama, 10 kks. 13
Rotterdam, { 5 / 2 cks. } 55
Demerara, 1 125 43
Bangkok, 2 cs. 12
Calcutta. 5 27
Delagoa Bay, 40 194
Pt. Elizabeth, 5 44
Bordeaux, 2 20
Karachi, 1 27
Tampico, 15 39
Durban, 23 32
Canterbury, 2 10
Dusseldorf, 45 54
Cologne, 5 kgs. 29
Hamburg, 41 241
Champerici, 8 22
Citric Acid—
Brisbane, 1 c. £6
B. Ayres, 7 43
Reval, 15 86
Hiogo, 1 6
Lisbon, 11 cks. 59
Seville, 15 87
Genoa, 1 t. 116
Coal Products—
Alizarine
Ghent, 2 cks. £24
Antwerp, 2 24
Otago, 6 100
Reval, 17 cs. 840
Aniline
Boulogne, 3 cks. £44
Anthracene
Cologne, 513 cks. £1,051
Rotterdam, 240 682
Benzol
Rotterdam, 2 dms. £15
Carbolic Acid
M. Video, 2 cs. £ 0
Rio de Janeiro, 4 dms. 8
Bombay, 5 170 49
New York, 70 cks. 229
Yokohama, 300 910
Dusseldorf, 80 600
Creosote
Newport News, 2 cs. £14
Creosote Salts
Philadelphia, 963 bgs. £313
Antwerp, 667 87
Dyes
Boulogne, 1 ck. £13
Naphtha
Treport, 40 cks. £105
Melbourne, 25 cs. 50 dms 79
Pitch
Alexandria, 200 brls. £73
Amsterdam, qty. 218
Dusseldorf, 16 123
Antwerp, 824 t. & qty. 3,417
Dunkirk, 403 190
Hong Kong, 1,060 cks. 555
Philadelphia, 250 85
Boston, 400 228
Bombay, 51 brls. 26
Pt. Elizabeth, 10 10
Rangoon, 30 9
Pyridine
Cologne, 23 cks. £250
Stettin, 5 2 dms. 280
Tar
Hamburg, 480 brls. £206
Alexandria, 5 6
Madras, 75 rnlts. 63
Bombay, 33 27
Las Palmas, 10 9
Singapore, 37 cks. 40
Delagoa Bay, 299 dms. 31
Sydney, 75 14
Cologne, 200 90
Pt. Elizabeth, 3 50 13
Tar Oil
Marseilles, 6 cks. £9
Copper Sulphate—
Odessa, 101 t. 5 c. £180
Dunkirk, 25 463
Marseilles, 25 10 473
Treport, 10 186
Pt. Elizabeth, 7 7
Wellington, 11 10
Cream of Tartar—
Fremantle, 5 c. £20
Melbourne, 2 t. 10 189
Sydney, 1 75
Wellington, 10 39
Disinfectants—
Bombay, 5 cs. £14
Brisbane, 2 40 dms. 36
Sydney, 6 17
Durban, 1 264 pks. 111
Halifax, 5 20
Canterbury, 5 13
Auckland, 5 13
Pt. Elizabeth, 3 20
Patras, 2 11
Berbice, 2 cks. 13
Glycerine—
Bombay, 10 cs. 20 dms. £49
Guano—
Jersey, 56 t. £352
Manure—
Barbadoes 25 t. £125
Demerara, 60 500
Cape Town, 125 8 c. 300
Jersey, 250 1 1,367
Durban. 29 3 190
Mauritius, 20 193
Guadaloupe, 600 5,400
Jamaica, 24 245
Gothenburg, 98 10 270
Hobart, 102 402
Sydney, 12 10 66
Oxalic Acid—
B. Ayres, 1 ck. £11
Phosphates—
Adelaide, 255 t. £695
Phosphorus—
Las Palmas, 1 cs. £11
Potash—
M. Video, 6 c. £8
Potassium Bichromate—
Auckland, 1 ck. £17
Potassium Chlorate—
Dunedin, 4 c. £7
Pt. Elizabeth, 1 t. 31
Bombay, 17 cks. 66
Potassium Chloride—
Martinique, 22 t. 13 c. £198
Potassium Cyanide—
Sydney, 2 t. £230
Madras, 14 c. 73
Delagoa Bay, 28 1 2,647
Rockhampton, 1 105
Pt. Elizabeth, 1 10 171
Los Angeles, 100 cs. 539
Tampico, 100 587
Potassium Prussiate—
Yokohama, 2 t. 10 c. £156
B. Ayres. 2 7
Saltpetre—
Oporto, 2 t. 2 c. £40
Hamburg, 2 2 44
Sheep Dip—
M. Video, 2 t. 16 c £65
Durban, 1 10 30 dms. 125
B. Ayres, 51 4 1,550
Wellington, 7 15 125
Pt. Elizabeth, 6 100
Cape Town, 12 13 260
Soda—
Quebec, 8 c. £8
Pt. Elizabeth, 3 t. 9
Rotterdam, 5 9 30
Sodium Bicarbonate—
Bombay, 6 c. £13
B. Ayres, 2 5
Sodium Hyposulphite—
Auckland, 1 t. 6 c. £8
Sodium Silicate—
Durban, 9 t. 15 c. £40
Sodium Sulphate—
Ghent, 161 t. £241
Sodium Sulphite—
Melbourne, 10 c. £10
Sulphur—
Durban, 5 t. 5 c. £31
E. London, 1 7 14
Pt. Elizabeth, 4 9 42
Durban, 10 1 59
Melbourne, 1 9
Sulphuric Acid—
Cape Town, 25 cs. £16
Singapore, 70 dms. 75
Superphosphates—
Martinique, 451 t. 14 c. £1,420
Mauritius, 50 175
Tartaric Acid—
Charters Towers, 3 c. £14
Brisbane, 4 19
Yokohama, 1 t. 5 38
Melbourne, 2 14
B. Ayres, 3 17
Melbourne, 10 54
Boulogne, 5 32
Durban, 2 cs. 12
E. London, 1 kg. 13

LIVERPOOL.

Week ending December 21st.

Acetic Acid—
Copenhagen, 3 t. 16 c. £75
Alkali—
Genoa, 50 t. £225
Corfu, 1 11 c. 6
Boston, 12 14 78
Valencia, 37 10 170
Bilbao, 9 3 2 q. 36
Mollendo, 15 9 2 60
Alum—
Calamata, 11 c. £3
Alexandretta, 6 t. 17 32
Santos, 6 2
Sydney, 5 23
Boston, 28 19 141
Porto Alegre, 1 19 1 q. 10
Calcutta, 56 14 281
Syra, 2 10
Alumina Sulphate—
Boston, 10 t. £52
Ammonium Carbonate—
Boston, 15 c. 3 q. £22
Hamburg, 1 t. 10 49
Barcelona, 10 12
Leghorn, 1 3 30
Riga, 1 1 3 33
Kobe, 1 3 30
Yokohama, 2 3 57
Melbourne, 19 2 29
Marseilles, 9 12
Ammonium Chloride—
Larnaca, 4 c. £6
Marseilles, 1 t. 5 22
Alexandria, 2 8 82
Patras, 3 5
Limassol, 4 6
Samsoun, 1 1 35
Piræus, 1 36
Volo, 5 9
Calcutta, 4 10 139
Bombay, 5 11 171
Genoa, 1 32
Barcelona, 1 12 50
Ponce, 1 kg. 4
Ammonium Sulphate—
Valencia, 196 t. 15 c. £2,258
Alicante, 25 250
Bilbao, 10 5 102
Riga, 15 8
Genoa. 35 16 2 q. 350
New York, 25 4 256
Baltimore, 50 6 509
Demerara, 75 15 762
Cette, 100 1,000
Tarragona, 5 50
Santa Cruz, 4 40
Teneriffe, 1 10 15
Gd. Canary, 30 2 301
Honolulu, 25 10 1 251
Lisbon, 40 3 2 420
Gandia, 45 18 1 551
Barcelona, 15 1 155
Basic Slag—
Demerara, 200 t. £400
Nantes, 216 15 c. 650
Bleaching Powder—
Amsterdam, 155 cks.
Baltimore, 50
Bombay, 52 cs.
Boston, 1,309
Calcutta, 110
Leghorn, 61
Lisbon, 40
Nantes, 14
New York, 145
Philadelphia, 165
St. John, N.B., 2
San Sebastian, 58
Borate of Lime—
Rotterdam, 43 t. £430
Borax—
Fremantle, 3 t. 1 c. £42
Johannesburg, 2 28
Tampico, 2 19 1 q. 30
M. Video, 10 7
Melbourne, 9 128
Rotterdam, 6 14 2 104
Hamburg, 20 8 327
St. John, N.B., 10 4 3 164
Wellington, 1 16
Sydney, 1 14
Calcium Biphosphate—
Supe, 2 t. £25
Calcium Chloride—
Barcelona, 4 t. 1 c. £12
Genoa, 4 2 9
Colombo, 3 7
Carbolic Acid—
Hamburg, 5 t. 6 c. 2 q. £324
New York, 1 10 07
Rotterdam, 5 6 3 0
Genoa, 9 3 37
Hiogo, 2 10 163
Yokohama, 11 3 622
Leghorn, 10 2 35
Malta, 1 cs. 10
Accra, 16 dms. 13
Caustic Potash—
Melbourne, 10 c. £18
Caustic Soda—
Alexandria, 20 dms.
Algoa Bay, 5
Antwerp, 2 27 brls.
Bahia, 35
Barcelona, 175 92 cks.
Bari, 35
Bombay, 6
Boston, 100
Brisbane, 10 cs.
Brussels, 8
Calcutta, 102
Catania, 35
Constantinople, 6 10 kgs.
Copenhagen, 60
Genoa, 265 6 brls.
Hamburg, 153
Havre, 34
Hiogo, 119
La Guayra, 25
Leghorn, 60
Lisbon, 178
Libau, 65
Melbourne, 211 6
Messina, 45
Newcastle, 70
New York, 50
Oporto. 13
Pysanda, 75
Pernambuco, 24
Rio de Janeiro, 40
Rio G. do Sal, 60
Rotterdam, 105
Rouen, 7
St. John, 50
San Juan, 6
San Sebastian, 100
Seville, 10
Sydney, 51 55 pks.
Trieste, 47
Valencia, 68
Valparaiso, 17
Yokohama, 100
Chemicals *(otherwise undescribed)*
Calcutta, 2 cks. 2 t. 1 c. 3 q. £46
M. Video, 21 1 1 59
Torento, 2 3 17
Perth, 1 16
Reval, 1 13 163
Philadelphia, 13 1 314
Bilbao, 2 9 3 30
Hamburg, 6 10 184
Odessa, 3 1 38
New York, 1 39
Trinidad, 2 cks. 6
China Clay—
Barcelona, 160 bgs.
Bilbao, 20 t.
Bombay, 72 10 c.
Boston, 1 639 cks.
Rouen, 50 bgs.
Coal Products—
Aniline Oil
Barcelona, 13 cks. 25 brls.
Philadelphia, 10 dms.
Aniline Salts
Genoa. 114 bxs.
New York, 12 cks.
Piræus, 5 20 brls.
Venice, 10
Creosote Oil
Bordeaux, 202 cks.
B. Ayres, 250 dms
Dyes
Barcelona, 5 cks.
Naphtha
Adelaide, 10 cs.
Melbourne, 20 9 dms.
Napthaline
Bordeaux, 274 cks.
Pitch
Antwerp, 50 t. 3 c.
Boston, 28 cks.
Cette, 1,182 t. 5
Dunkirk, 221 12
Malta, 50 brls.
Tar
Philadelphia, 100 brls.
Copperas—
B. Ayres, 1 t. q. £2

Copper Sulphate—

Cette,	110 t.	18 c.	2 q.	£1,970
Messina,	5	13	1	91
Bone,	3	11	3	56
Phillipville,	24	7	1	387
Cape Town,		5		5
Genoa,	11	5		194
Palermo,	5	4		87
Penang,	1			17
Vera Cruz,	1			17
Ancona,	10	1		165
B. Ayres,		19		17
Talcahuano,	3	10		68
Naples,	5	2		86
Smyrna,	1	3		21

Cresylic Acid—

Boston,	1 t.	3 c.	2 q.	£19

Disinfectants—

Bahia,		9 c.		£7
C. Coast Castle,		14	1 q.	13
Bombay,	5 t.	8		74

Dried Blood—

Santa Cruz,	1 t.			£7

Dyestuffs—

Aniline Colours

New York,	19 cks.	5 kgs.
St. John,		1

Extracts

Barcelona,	20 cks.
Boston,	25
New York,	4

Logwood

Alexandria,	40 bgs.

Dyestuffs (*otherwise undescribed*)

Bombay,	1 cs.

Glycerine—

Vancouver,	14 t.	14 c.	£604
Seville,		10	19
Malaga,		10	19
Oporto,		15	34
Karachi,		2	5
Boston,	10		430
Bilbao,	5		201
Hiogo,	1		60

Guano—

Bahia,	2 t.	10 c.	£12

Iron Oxide—

Philadelphia,	14 t.	7 c.	£62
M. Video,	14		163

Lead Acetate—

Santos,		7 c.	3 q.	£10

Magnesia—

Gibraltar,	1 c kgs. 20 brls.
Mayaquez,	3 cs.
Rouen,	45
Vera Cruz,	10

Manganese Oxide—

Natal,	19 cks.	£69

Manure—

New York,	2 t.	5 c.	£30
Gd Canary,	3		10
Teneriffe,	10		62
Santa Cruz,	12	1	92
Seville,	4	18	32

Paint—

Alexandria,	20 dms.
Bordeaux,	12
B. Ayres,	16 kgs.
Colombo,	18
Curacao,	75
E. London,	2 cs.
Greytown,	35
Iquique,	22
Kingston,	2 cks.
Kingston, Ja.,	155
Las Palmas,	70
Loanda,	1,021
Mayaguez,	30
M. Video,	10
Nassau,	75 5
Novo Redendo,	8 cs.
Old Calabar,	45 pks.
Opobo,	26
Oporto,	34
Para,	24 brls. 3 cks.
Philadelphia,	250 bgs.
Ponce,	45 kgs.
Praiu,	102
Progresso,	2
Rio de Janeiro,	120 dms.
Rotterdam,	53 bgs.
St. Domingo,	5
St. John's,	10
St. Louis.	200 7 100 brls.
St. Thome,	74 kgs.
Salavery,	6 cks.
San Juan,	4
Secondee,	8
Sierra Leone,	63 5
Talcahuano,	50 14 cs.
Trieste,	22
Valencia,	5 crts.

Painters' Colours—

Alexandria,	13 pks.
Bahia,	10 kgs.
B. Ayres,	15 cks. 130 cs.
Carupano,	100 kgs.
Havana,	4 7 brls.
Hong Kong,	133 dms.
Kerasunde,	12 cs.
Kurachee,	60 11
M. Video,	5 cks.
Montserrat,	3
Valparaiso,	qty.

Paraffin Wax—

Genoa,	1 ck.
Leghorn,	92 bgs. 100 c.
Odessa,	60
Palermo,	20
Para,	20 cs.

Phosphorus—

Havana,	11 c	£148

Phosphorus (Amorph.)—

San Juan,	5 c.	£57

Potassium Bicarbonate—

New York,	1 t.	2 c.	£29

Potassium Bichromate—

Smyrna,	2 t.	3 c.	1 q.	£70
Oporto,	1	4	3	38
Valparaiso,		17	2	10

Potassium Chlorate—

Philadelphia,	8 t.		£240
New York,	93	15 c.	713
Boston,	7	10	225
Habana,		15	23
Batoum,	5		152
Melbourne,	1		30
Hamburg,	4	4	117
Copenhagen,	5		150
Randers,	1		30
Ancona,		17	25
Libau,	2	10	75
Shanghai,	4	10	133
Naples,	2		60
Bari,	2		60
San Juan,	2	10	89

Potassium Nitrate—

Ponce	2 kgs.	£5

Pottasium Stannate—

Bombay,	1 t.	16 c.	2 q.	£105

Salt—

Akassa,	415 t.
Abonnema,	10
Amsterdam,	100
Antwerp,	349
Axim,	2,000 bgs.
Bakana,	500
Baltimore,	1,785 t. 12 c.
Barbadoes,	50
Bordeaux,	30
Boston,	150
Brass,	15
Brisbane,	75
B. Ayres,	100 cs.
Bugun a,	100
Calcutta,	3,242
Callao,	59 9 c.
Cape Town,	50
Conakry,	146 12
Chicago,	30
Degama,	100
Demerara,	2 1
Gd. Lahou,	5
Kingston, Jam.,	10
N. Orleans,	650
New York,	215
Old Calabar,	40
Opobo,	100
Philadelphia,	30
Paget Sound,	380
Punta Arenas,	30
Rangoon,	798
Rotterdam,	100
Sherbro,	31 5
Sydney,	200
Vancouver,	102
Victoria,	250
Warri,	7 10
Winnebah,	25

Salt Cake—

Antwerp,	120 t.		£155
Baltimore,	40	16 c.	66
Genoa,	5	1	9
Leghorn,	30		43
Lisbon,	30		49
Philadelphia,	25	12	41

Saltpetre—

Cartagena,	6 t.	6 c.	£135
Para,	2		44

Sheep Dip—

B. Ayres,	2,000 dms. 16 t.	5 c.		£1,509
M. Video,	1	10	2 q.	78

Soap—

Alexandria,	3 bxs.		10 cks.
Algoa Bay,	602		
Assinee,	200		
Axim,	155		
Barbadoes,	300		
Barberton,	100		
Bombay,	30	27 cs.	
B. Ayres,		98	
Burutu,	50		
Calcutta,		21	750 bdls.
Cape Town,	452	142	
Cartagena, N.G.,	19		
Chama,	50		
Constantinople,		25	
Conakry,	20		
Delagoa Bay,	1,625		
Demerara,	3,180	21	
Dominica,	40		
Durban,	350		
E. London,		90	
Gd. Bassa,	50		
Hong Kong,			55 dms.
Johannesburg,	270		
Kingston Jam.,	16	20 kgs.	
Lagos,	400		
Las Palmas,	673		
Leghorn,		10 cs.	
Malta,	31		
M. Video,		1	
Menado,		1	
Mossel Bay,	50		
N. Orleans,	201		
New York.		8 brls.	
Old Calabar,		712 cs.	
Pt. Natal,		3,150	204 pks.
Pt. Said.		25	
Punta Arenas,		80	
Rangoon,	250	90	
Rotterdam,		410	
St. Croix,		200	
St. John,		1	
St. John's,		10	
St. John's, N'fld.,		7	
St. Kitts,		250	
Salt Pond,		200	
Samarang,		5	
Shanghai,	5,000		
Sierra Leone,		109	
Singapore,	150	1,056	
Smyrna,		44	
Surinam,	75		
Sydney,		2	
Tangiers,	20		
Valparaiso,	150 kgs.		
Yokohama,		3	

Soda Ash—

Aalborg,	100 bgs.		
Amsterdam,	450		
Antwerp,	1,000		
Baltimore,			54 cks.
Barcelona,			212
Bombay,			6
Boston,	1,930	31 tcs.	43
Brussels,	1,609		
B. Ayres,			50
Calcutta,	250 kgs.		508
Copenhagen,	200 bgs.		
Genoa,	1,021		
Ghent,	262		
Hamburg,			71
Hiogo,			386
Libau,	100		
Lisbon,			12
Messina,	50		
Namur,	1,855		
New York,	150	15	46
Oporto,		1 brl.	
Paysandu.		50	
Philadelphia,		24 tcs.	
Rio de Janeiro,		25 brls.	
Rio G. do Sul,			200
Rotterdam,	50		
Smyrna,	100		
Sydney,			321
Tampico,			13
Valparaiso,			25
Venice,	100		1

Soda Crystals—

Bari,		15 brls.	
Cape Town,	40 kgs	20	
Constantinople,		20	
Gibraltar,		70	
Malta,		145	
Messina,			10 cks.
M. Video,	26		
St John's,	60 bxs.		

Sodium Bicarbonate—

Alexandria,	45 kgs.	
Bari,	40	
Bombay,	920	
B. Ayres,		18 cks.
Calcutta,	1,000	
Calicut,	30 bgs.	
Canea,	20 kgs.	
Cape Town,	8 bgs.	
Delagoa Bay,		6
Genoa,	75 kgs.	
Gijon,	44	
Halifax,	11	100 dms.
Johannesburg,	60	
Kurrachee,	460	
Marseilles,	50 bgs. 63 kgs.	23 cks.
Melbourne,	1,791	
M. Video,	35	23
Newcastle,	100	
New York,	100	
Odessa,	50	
Palermo,	20	
Philippines	30	
Rouen	115	21 brls.
St. John's,	40	
Sierra Leone,	20	
Singapore,		10
Sydney,	600	
Syra,		3
Toronto,		200 dms
Vera Cruz,	175	
Yokohama,	500	

Sodium Carbonate—

Boston,	36 brls.

Sodium Chlorate—

Antwerp,	20 kgs.
Boston,	100
Hamburg,	3 cks.
New York,	100 kgs.

Sodium Hyposulphite—

Toronto,	75 kgs.

Sodium Silicate—

Corunna.	12 brls. 10 dms.

Sodium Sulphate—

Toronto,	3 cks.

Stannous Chloride—

Demerara,	1 t.	£38

Starch—

Ferrol,	10 cs.
Santos,	2 cks.

Sulphur—

B. Ayres,	10 t.	1 c.	£10
Boston,	50	2	314
Mayaquez,		2	5
Para,	2	10	10
St. John's,	2		6
Vera Cruz,	10	10	3 q. 18

Sulphuric Acid—

Iquitos,	15 c.	£3

Superphosphates—

Bordeaux,	49 t.	4 c.	£98
Cape Town,	267	15	613
Oporto,	50		113
Pasages,	20	1	79
Santa Cruz,	2		8

Tartaric Acid—

Havana,	2 c.	£15

Varnish—

Antofagasta,	1 cs.
E. London,	1
Kerasunde,	1
Madras	5
Pacasmayo,	1
Payta,	2
Velade Coro,	1 brl. 6 c.

Verdigris—

Philadelphia,	1 t.	18 c.	£17

White Lead—

Bahia,	10 kgs.	
Cape Town,	3	140 dms.
Hong Kong,	1 ck.	
Sierra Leone,	32 kgs.	

Zinc Chloride—

Bombay,	5 t.	19 c.		£
Piræus,	4	4		
Manila,	1	8	2 q.	

MANCHESTER

Week ending December 21st.

Alum—

Bombay,	93 brls.

Aniline Colours—

Germany,	20 kgs.	9 cs.
Paris,		1

Bones—

Belgium,	140 bgs.
Treport,	312

Coal Products—

Aniline Oil

Belgium,	4 dms.
Germany,	15

Aniline Salts

Germany,	25 cks.	11 pns.

Naphtha

Paris,	25 cks.

Naphthylamine
Germany, 29 cks.
Switzerland, 13
Paranitraniline
Germany, 15 kgs.
Pitch
Belgium, 496 t.
Cette, 116
Malaga, 987
Marseilles, 48 11 c.

Colours—
Belgium, 1 ck.

Glue—
Bohemia, 1 ck.
Germany, 1
Holland, 19
Saxony, 5

Glycerine—
Belgium, 6 dms.
Germany, 13 crbys. 4
Stettin, 5

Salt—
St. John's, N.B., 4,200 sks.

Soap—
Holland 54 cs.

Sodium Naphthionate—
Germany, { 3 cks. / 32 bgs.
Switzerland, 16 cks.

Zinc Chloride—
Bombay, 6 cks.
Germany, 20

HULL.

Week ending December 17th.

Alkali—
Abo, 50 bgs.
Harlingen, 17 dms.

Ammonium Sulphate—
Antwerp, 694 bgs.
Marseilles, 701
Stettin, 500

Caustic Soda—
Genoa, 100 dms.
Riga, 18

Chemicals *(otherwise undescribed)*
Abo, 10 cks.
Amsterdam, 107
Antwerp, 16 35 cs.
Constantinople, 141
Copenhagen, 54 5 dms.
Christiania, { 26 / 921 slbs. / 1 pk.
Danzig, 9 10
Genoa, 50 2
Gothenburg, 2 30
Hamburg, 30 55
Naples, 4
New York, 24
Odessa, 381 2 170
Riga, 132
Rotterdam, 14 63
Ruamo, 10
Stettin, 5

Cottonseed Oil—
Amsterdam, 700 c.
Antwerp, 423
Bremen, 70
Bordeaux, 114
Copenhagen, 200
Christiania, 51
Gothenburg, 99
Ghent, 307
Harlingen, 178
Hamburg, 915
Konigsberg, 150
Rotterdam, 3,512
Rouen, 2,873
Stavanger, 84

Creosote—
Copenhagen, 20 brls.

Creosote Salts—
Antwerp, { 153 brls. / 145 bgs.

Dyestuffs *(otherwise undescribed)*
Christiania, 4 cks.
Danzig, 1 cs.
Odessa, 8

Glue—
Gothenburg, 40 bgs.
Hamburg, 10

Linseed Oil—
Amsterdam, 100 c.
Antwerp, 113
Constantinople, 17
Christiania, 117
Copenhagen, 20
Dunkirk, 40
Drontheim, 53
Hamburg, 34
Stavanger, 21

Manure—
Dunkirk, 50 t.

Mineral White—
Antwerp, 100 bgs.

Naphtha—
Marseilles, 35 brls.

Paint—
Antwerp, 20 cks.
Rotterdam, 11

Painters' Colours—
Amsterdam, 3 cks. 3 cs.
Antwerp, 4 7 24 dms.
Bordeaux, 1
Christiania, 1 2
Constantinople, 1
Copenhagen, 6 4
Danzig, 16
Genoa, 39
Gothenburg, 16
Ghent, 10
Hamburg, 7 2
Leghorn, 4
New York, 33 3 pks.
Odessa, 34 1
Rotterdam, 29 15 dms.
Stockholm, 6

Pitch—
Antwerp, 244 t.
Rouen, 100 bgs.

Soap—
Amsterdam, 82 cs.
Christiania, 1
Copenhagen, 1
Drontheim, 71

Starch—
Gothenburg, 5 bls.

Tar—
Dunkirk, 25 cks.
Rotterdam, 11

Turpentine—
Antwerp, 200 brls.

Varnish—
Antwerp, 2 cks. 2 cs. 1 dm.
Bordeaux, 2 brls.
Danzig, 1 2 cs.
Stockholm, 2

Whiting—
Antwerp, 21 cks.

GLASGOW.

Week ending December 22nd.

Alum—
B. Ayres, £21

Alum Cake—
Calcutta, £20

Ammonium Carbonate—
Christiania, £39

Ammonium Sulphate—
Baltimore, 157 t. 9⅛ c.
Bayonne, 15 4¼
Bordeaux, 17 14
Cette, 245 4½
Hamburg, 252 11
Valencia, 289 15

Boracic Acid—
Antwerp, £46 6s.
Melbourne, 72 10

Borax—
Melbourne, £35 12s.
Rotterdam, 148 17

Carbolic Acid—
Rotterdam, £100

Castor Oil—
Sydney, 12¾ c.

Chalk—
B. Ayres, £55

Chemicals *(otherwise undescribed)*
Bangkok, 2 t. 10 c.

Coal Products—
Creosote Oil
Bayonne, £265
Boston, 75
Bordeaux, 2,175
Christiania, £12 13s.
U.S.A., £57
Dyes
Calcutta, £40
Naphtha
Christiania, £8 5s.
Pitch
Antwerp, £2f0
Bayonne, 214
Cadiz, 370
Dieppe, 550 t.
Halifax, 20
Tronville, 300

Tar
Calcutta, £296
Christiania, 77
Tar Oil
Cette, £75
France, 70

Colours—
Christiania, £50

Dextrine—
U.S.A., £214

Extracts—
Barcelona, £143
Belgium, £99 4s.
Victoria, 51 12

Gelatine—
Philadelphia, £196

Hydrochloric Acid—
Bombay, £128

Lead Acetate—
Bombay, £87

Linseed Oil—
Adelaide, 2 t. 8 c.
Singapore, 2 8

Magnesium Oxide—
New York, £115

Magnesium Sulphate—
Sydney, £25

Manganese Borate—
Melbourne, £60

Paint—
Newcastle, £91
Shanghai, 300

Painters' Colours—
Antwerp, £40
Calcutta, £452 14s.
Guayaquil, 68 9
Hong Kong, £272
Iquique, 81
Rotterdam, 3

Paraffin Wax—
Barcelona, £27
Bombay, 112
Cape Town, 53
Marseilles, 51
Rio de Janeiro, 79
Valencia, 74

Plumbago—
Bilbao, £25

Potassium Bichromate—
Antwerp, £61
Barcelona, 201
Bombay, 227
Boston, 399
Philadelphia, 390

Potassium Cyanide—
Corunna, £56

Potassium Prussiate—
Barcelona, £80 6s.
B. Ayres, £120

Sheep Dip—
B. Ayres, £353
Gallegos, 70
Salaverry, 64
Santa Cruz, 325

Soap—
Antwerp, £42
Genoa, £2,093 6s.
Valparaiso, 1 t. 6¼ c.

Sodium Bichromate—
Barcelona, 1 t. 4¼ c.
Bombay, 1 ½

Tallow—
Barcelona, 5 t. 15¾ c.
Colombo, 6 1
Oporto, 1 7½

Waste Salt—
Valencia, 10 t.

White Lead—
Newcastle, N.S.W., £70

TYNE.

Week ending December 17th.

Alkali—
Amsterdam, 23 t. 1 c.
Bergen, 2 16
Christiania, 1 16
Hamburg, 1 13
Rotterdam, 9 16

Ammonia—
Drontheim, 10 c.

Antimony—
Antwerp, 1 t.
Hamburg, 5
Reval, 20

Barium Binoxide—
Antwerp, 10 t. 6 c.
Leghorn, 5 9

Barium Carbonate—
Hamburg, 1 t. 10 c.

Bleaching Powder—
Amsterdam, 52 t. 12 c.
Christiania, 16 10
Copenhagen, 51 6
Hamburg, 4 6
Oporto, 5
Reval, 55
Rotterdam, 7 18

Calcium Carbide—
Antwerp, 1 t. 7 c.

Caoutchouc—
Bergen, 19 lbs.

Caustic Soda—
Arendal, 2 t. 18 c.
Christiania, 6 16
Copenhagen, 2 18
Genoa, 32 1
Hamburg, 22 18

Litharge—
Amsterdam, 1 t. 9
Oporto, 15
Reval, 4 19

Magnesia—
Antwerp, 4 c.
Hamburg, 1 t. 11
Rotterdam, 19

Paint—
Antwerp, 10 c.

Painters' Colours—
Hamburg, 1 ck.

Soda—
Amsterdam, 10 t.
Christiania, 10 6 c.
Copenhagen, 4
Rotterdam, 10 4

Soda Ash—
Bergen, 10 t.

Sodium Sulphate—
Aalborg, 25 t.

Sulphur—
Sannesund, 350 t.

White Lead—
Copenhagen, 9 c.
Hamburg, 2 t. 6

GOOLE.

Week ending December 14th.

Alkali—
Rotterdam, 1 ck.

Chemicals *(otherwise undescribed)*
Antwerp, 18 cks. 1 cs.

Coal Products *(otherwise undes.)—*
Amsterdam, 74 cks.
Antwerp, 104
Boulogne, 8 tins 1 cs. 1 dm.
Rotterdam, 20 cks 4

Dyestuffs *(otherwise undescribed)*
Hamburg, 22 cks.

Manure—
Antwerp, 184 bgs.
Dunkirk, 350
Ghent, 180
Hamburg, 1,037

Painters' Colours—
Antwerp, 3 cks.
Boulogne, 3 7 cs.
Hamburg, 2

Pitch—
Antwerp, 685 t.

GRIMSBY.

Week ending December 17th.

Alkali—
Dieppe, 5 cks. 4 cs.
Hamburg, 20
Rotterdam, 8

Ammonium Sulphate—
Antwerp, 15 t.

Chemicals *(otherwise undescribed)*
Antwerp, 1,000 dms.
Dieppe, 8 cs.

Coal Products *(otherwise undes.)—*
Dieppe, { 4 kgs. / 59 cks. 1 cs.
Hamburg, 5 brls.

Manure—
Antwerp, 4 cks.
Hamburg, 23 bgs.

Painters' Colours—
Antwerp, 2 cks 4 cs.
Hamburg, 2 2
Rotterdam, { 2 kgs. / 6 cks. 1 pks.

PRICES CURRENT.

WEDNESDAY, Dec. 28, 1898.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	5	0
Alum, loose lump .. .. ,,	4	7	6
Alumina Sulphate (pure) .. .. ,,	3	17	6
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	2	6
,, ,, (grey) Hull .. .. ,,	10	2	6
Aniline Oil (pure) .. .. per lb.	0	0	5
Aniline Salt ,, ... ,,	0	0	4½
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9
,, 50/90 ,, ... ,,	0	0	9
Carbolic Acid (crude 60°) .. .. ,,	0	1	11
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. ,,	1	2	6
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	57	5	0
,, Sulphate .. .. ,,	18	10	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	5	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	15	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	16	10	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	5	0
Linseed .. .. ,,	17	10	0
Stearine .. .. ,,	25	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	14	15	0
,, Chlorate .. .. per lb.	0	0	3⅝
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. per ton	22	5	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	15	0
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3⅛
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	7	6
,, Acetate (ex-ship) .. .. ,,	12	5	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Borate (Borax) .. .. nett per ton	15	5	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	4⅝
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	0
,, ,, (Glauber's Salts .. .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	2	6
,, (Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	22	10	0
Tin Crystals .. .. per lb.	0	0	5¾
,, English Ingots .. .. per ton	88	10	0
Zinc (Spelter) .. .. ,,	23	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	6	10	0
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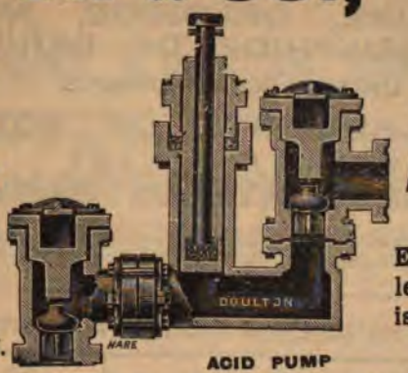

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Sealed and endorsed Tenders to be sent to me not later than Tuesday, July 19th, 1898.

By Order,
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Town Clerk.

Municipal Buildings,
Heywood, July 1st, 1898.

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By Order,
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Public Offices,
Tipton, 5th July, 1898.

Miscellaneous.

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F. C. LLOYD,
Town Clerk.

Town Hall,
Huddersfield,
11th August, 1898.

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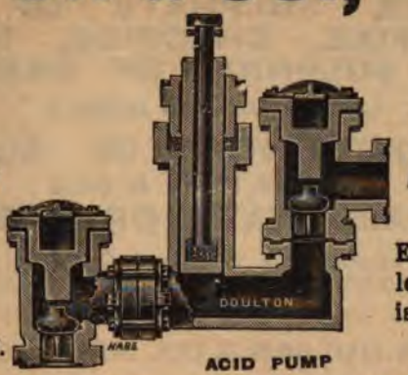

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